Requestor's Name: Rebecca Cook Serial Number: 09/021421

Date: 4/21/04 Phone: 5 Rem 4 C70 Art Unit: 1614

Search Topic: mw. Russel + Jordan MEJ

Please write a detailed statement of search topic. Describe specifically as possible the subject matter to be searched. Define any terms that may have a special meaning. Give examples or relevent citations, authors, keywords, etc., if known. For sequences, please attach a copy of the sequence. You may include a copy of the broadest and/or most relevent claim(s).

Please search composition comprising 8-hydroxyquinoline & chelatable metal, further having limitations of claims 2 - 5.

Search ingredients of claims 15, 17, 18, 20, 21, 35, 36 & then use in compositions

Thank you
Rebecca

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Date completed: _____
Searcher: _____
Terminal time: _____
Elapsed time: _____
CPU time: _____

Search Site
_____ STIC
_____ CM-1
_____ Pre-S

Type of Search

Vendors
_____ IG
747.24 STN
_____ Dialog
_____ APS

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=> d que l35
L1             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  8-HYDROXYQUINOLINE/CN
L18       165673 SEA FILE=REGISTRY ABB=ON  PLU=ON  ZN/ELS
L23            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  IRON/CN
L26            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  COBALT/CN
L27       263268 SEA FILE=REGISTRY ABB=ON  PLU=ON  MO/ELS
L29            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  MANGANESE/CN
L31            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  COPPER/CN
L32         2026 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1 AND (L23 OR L18 OR L26 OR
                 L27 OR L29 OR L31)
L34          332 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1(L)CHELAT?
L35          164 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L32 AND L34

=> d l35 1 ibib ab hitstr 1-10 50-60 100-110 154-165
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← only a few references printed from this set.

L35 ANSWER 1 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2004:54807 HCAPLUS
DOCUMENT NUMBER: 140:227882
TITLE: Studies on liquid/liquid extraction of copper ion with room temperature ionic liquid
AUTHOR(S): Wei, Guor-tzo; Chen, Jin-chu; Yang, Zusing
CORPORATE SOURCE: Department of Chemistry and Biochemistry, National Chung Cheng University, Chia-Yi, 621, Taiwan
SOURCE: Journal of the Chinese Chemical Society (Taipei, Taiwan) (2003), 50(6), 1123-1130
CODEN: JCCTAC; ISSN: 0009-4536
PUBLISHER: Chinese Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

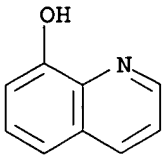
AB Room temp. ionic liqs. are regarded as Green solvents for their nonvolatile and thermally stable properties. They are employed to replace traditional volatile org. solvents in org. synthesis, solvent extn., and electrochem. A water immiscible room temp. ionic liq., 1-butyl-3-methylimidazolium hexafluorophosphate [C4mim][PF6], was used as an alternative solvent for liq./liq. extn. of copper ions. Metal chelators, including dithizone, 8-hydroxyquinoline, and 1-(2-pyridylazo)-2-naphthol, were employed to form neutral metal-chelate complexes with copper ions so that copper ions were extd. from aq. soln. into [C4mim][PF6]. The parameters that affect the extn. of copper ions with this biphasic system were studied. The extn. behavior in this novel biphasic system is consistent with that of traditional solvents. For example, the extn. with this biphasic system is strongly pH dependent. So, the extn. efficiency of coppers ion from an aq. phase can be manipulated by tailoring the pH value of the extn. system. Hence, the extn., sepn. and preconcn. of copper ions can be accomplished by controlling the pH value of the extn. system. Apparently the use of ionic liq. as an alternate solvent system in liq./liq. extn. of copper ions is very promising.

IT **7440-50-8**, Copper, analysis
RL: ANT (Analyte); ANST (Analytical study)
(copper chelate complexes liq./liq. extn. with room temp. ionic liq.)

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IT **148-24-3**, 8-Hydroxyquinoline, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(copper **chelate** complexes liq./liq. extn. with room temp. ionic liq.)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

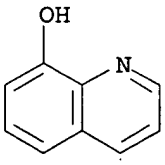
L35 ANSWER 2 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:945447 HCAPLUS
DOCUMENT NUMBER: 139:401392
TITLE: Zinc chelates, their bluegreen-emitting electroluminescent compositions, and organic electroluminescent devices
INVENTOR(S): Torii, Masafumi; Sasaki, Masaomi; Kawamura, Shinichi; Okada, Takashi; Kosaka, Toshiya
PATENT ASSIGNEE(S): Ricoh Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003342278	A2	20031203	JP 2002-158351	20020530

PRIORITY APPLN. INFO.: JP 2002-158351 20020530

AB The chelates have 8-hydroxyquinoline ligands and C.gtoreq.6 fatty acid ligands. The devices having the compns. as emitter layers show high luminescence intensity.

IT **148-24-3D**, 8-Hydroxyquinoline, zinc complex **7440-66-6D**, Zinc, complexes with hydroxyquinolines and fatty acids
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(bluegreen-emitting zinc **chelates** with hydroxyquinolines and fatty acids for org. electroluminescent devices)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



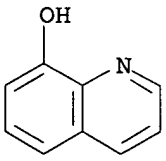
RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L35 ANSWER 3 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:901820 HCAPLUS
DOCUMENT NUMBER: 140:145980
TITLE: Preparation and evaluation of sulfur-containing metal chelators
AUTHOR(S): Clavier, Sylvain; Rist, Oystein; Hansen, Stina; Gerlach, Lars-Ole; Hoegberg, Thomas; Bergman, Jan
CORPORATE SOURCE: Center for Nutrition and Toxicology, Karolinska Institute, Hudding, SE-141 57, Swed.
SOURCE: Organic & Biomolecular Chemistry (2003), 1(23), 4248-4253
CODEN: OBCRAK; ISSN: 1477-0520
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB With a view to probe the structure and function of G-protein coupled receptors the synthesis of functionalized 8-mercaptoquinoline derivs. and 2-(2-pyridyl)thiophenol was achieved. A fluorescence-based method for detg. the affinity of these metal chelators toward zinc ions was developed.
IT **7440-66-6**, Zinc, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(Gould-Jacobs cycloaddn. of; prepn. of functionalized mercaptoquinoline derivs. and (pyridyl)thiophenol metal chelators and their zinc ion affinity)
RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

IT **148-24-3**, 8-Hydroxyquinoline, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(nitration of; prepn. of functionalized mercaptoquinoline derivs. and (pyridyl)thiophenol metal **chelators** and their zinc ion affinity)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)

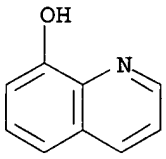


REFERENCE COUNT: 30 THERE ARE 30 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 4 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:536189 HCAPLUS
DOCUMENT NUMBER: 139:241609
TITLE: The protective effect of free radical scavengers and metal chelators on polyethylene glycol-treated rice leaves
AUTHOR(S): Hsu, S. Y.; Kao, C. H.
CORPORATE SOURCE: Department of Agronomy, National Taiwan University, Taipei, Taiwan, 106, Peop. Rep. China
SOURCE: Biologia Plantarum (2003), 46(4), 617-619
CODEN: BPABAJ; ISSN: 0006-3134
PUBLISHER: Institute of Experimental Botany, Academy of Sciences of the Czech Republic
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Effect of free radical scavengers and metal chelators on polyethylene glycol (PEG, osmotic potential -1.5 MPa) induced oxidative damage in detached rice leaves was investigated. PEG treatment resulted in a decrease in relative water content and an increase in proline content, and lipid peroxidn. PEG treatment also decreased chlorophyll and protein contents. Free radical scavengers (ascorbate, sodium benzoate, reduced glutathione, and thiourea) retarded and metal chelators [2,2'-bipyridine (BP), 8-hydroxyquinoline, and 1,10-phenanthroline] prevented PEG-induced oxidative damage. Furthermore, the protective effect of BP was reversed by adding Fe2+ and Cu2+, but not by Mn2+ or Zn2+. The protective effect of BP is most likely mediated through chelation of iron. It seems that oxidative damage induced by PEG may require the participation of iron.

IT **148-24-3**, 8-Hydroxyquinoline, biological studies
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(protective effect of free radical scavengers and metal **chelators** on oxidative damaged rice leaves)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **7439-89-6**, Iron, biological studies **7439-96-5**, Manganese, biological studies **7440-50-8**, Copper, biological studies **7440-66-6**, Zinc, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(role in induction of chlorophyll and protein loss in rice leaves caused by oxidative damage; protective effect of free radical scavengers and metal chelators on oxidative damaged rice leaves)
RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7439-96-5 HCAPLUS
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

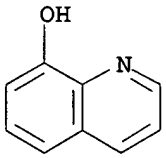
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 5 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:368075 HCAPLUS
DOCUMENT NUMBER: 139:206869
TITLE: Hydroxyquinolines as iron chelators
AUTHOR(S): Pierre, J.-L.; Baret, P.; Serratrice, G.
CORPORATE SOURCE: Laboratoire de Chimie Biomimetique, LEDSS, UMR CNRS 5616, Universite J. Fourier, BP 53, Grenoble, 38041/9, Fr.
SOURCE: Current Medicinal Chemistry (2003), 10(12), 1077-1084
CODEN: CMCHE7; ISSN: 0929-8673
PUBLISHER: Bentham Science Publishers Ltd.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
AB A review. The interest in synthetic siderophore mimics includes therapeutic applications (iron chelation therapy), the design of more effective agents to deliver Fe to plants and the development of new chem. tools for studies of iron metab. and for a better understanding of iron assimilation processes in living systems. The 8-hydroxyquinoline bidentate chelate moiety offers an alternative to the usual hydroxamic acid, catechol and/or .alpha.-hydroxycarboxylic acid metal-binding groups encountered in natural siderophores. The promising results obtained by the tris hydroxyquinoline-based ligand O-TRENSOX are summarized. O-TRENSOX exhibits a high and selective affinity for Fe(III) complexation. Its efficiency in delivering Fe to plants as well as its efficiency for iron mobilization, cellular protection and antiproliferative effects have been evidenced. Other chelators of the O-TRENSOX family (mixed catechol / 8-hydroxyquinoline ligands, lipophilic ligands) are also described. Some results question whether the use of partition coeffs. is pertinent to foresee the activity of iron chelators. The development of probes (fluorescent, radioactive, spin labeled) based on the O-TRENSOX backbone is in progress. 8-Hydroxyquinoline iron chelators seem to have a promising future.
IT **7439-89-6**, Iron, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(chelators; hydroxyquinolines as iron chelators)

RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

IT **148-24-3D**, 8-Quinolinol, derivs.
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hydroxyquinolines as iron **chelators**)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 36 THERE ARE 36 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 6 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:327845 HCAPLUS
DOCUMENT NUMBER: 139:110673
TITLE: Preconcentration and adsorption of metal chelates with analysis by direct sample insertion inductively coupled plasma atomic emission spectrometry
AUTHOR(S): Skinner, Cameron D.; Salin, Eric D.
CORPORATE SOURCE: Department of Chemistry and Biochemistry, Concordia University, Montreal, QC, H3G 1M8, Can.
SOURCE: Journal of Analytical Atomic Spectrometry (2003), 18(5), 495-500
CODEN: JASPE2; ISSN: 0267-9477
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English
AB An automated preconcn. system that uses adsorption of 8-hydroxyquinoline (8-HQ) metal chelates onto a silica-C18 column was evaluated. The metal chelates are desorbed with methanol and sprayed into an inductively heated graphite direct sample insertion cup. In this manner the org. solvent and much of the 8-HQ is removed and does not appear to cause interferences in the plasma. The detection limits of the current system are 8, 30, 60, 10, 9 and 40 parts per trillion for Cd, Cu, Fe, Mn, Pb and Zn, resp., using the reagents as purchased. Instrumental detection limits of 1, 0.2, 90, 0.3, 2 and 10 ppt for the same elements were calcd. assuming that blank contamination can be eliminated.
IT **7439-89-6**, Iron, analysis **7439-96-5**, Manganese, analysis **7440-50-8**, Copper, analysis **7440-66-6**, Zinc, analysis
RL: ANT (Analyte); ANST (Analytical study)
(metals detn. in soln. by preconcn. and adsorption of metal chelates and direct sample insertion inductively coupled plasma at. emission spectrometry)
RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7439-96-5 HCAPLUS
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

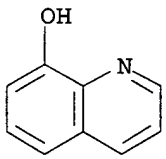
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

IT **148-24-3**, 8-Hydroxyquinoline, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(metals detn. in soln. by preconcn. and adsorption of metal **chelates** and direct sample insertion inductively coupled plasma at. emission spectrometry)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 7 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:295276 HCAPLUS
DOCUMENT NUMBER: 138:312623
TITLE: Post clean treatment of metal or dielectric surfaces in the manufacture of wafers
INVENTOR(S): Small, Robert J.
PATENT ASSIGNEE(S): EKC Technology, Inc., USA
SOURCE: U.S., 20 pp., Cont.-in-part of U.S. 6,156,661.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 14
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6546939	B1	20030415	US 2000-704688	20001103
US 5279771	A	19940118	US 1990-610044	19901105
US 5334332	A	19940802	US 1992-911102	19920709
US 5981454	A	19991109	US 1997-801911	19970214
US 5911835	A	19990615	US 1997-826257	19970327
US 6156661	A	20001205	US 1999-384946	19990827

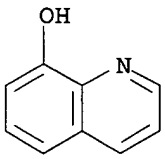
PRIORITY APPLN. INFO.:
US 1990-610044 A2 19901105
US 1992-911102 A2 19920709
US 1993-78657 B3 19930621
US 1995-443265 B1 19950517
US 1997-801911 A3 19970214
US 1997-826257 A2 19970327
US 1999-384946 A2 19990827

OTHER SOURCE(S): MARPAT 138:312623

AB A compn. for removal of chem. residues from metal or dielec. surfaces or for chem. mech. polishing of a copper or aluminum surface is an aq. soln. with a pH between about 3.5 and about 7. The compn. contains a monofunctional, difunctional or trifunctional org. acid and a buffering amt. of a quaternary amine, ammonium hydroxide, hydroxylamine, hydroxylamine salt, hydrazine or hydrazine salt base. A method in accordance with the invention for removal of chem. residues from a metal or dielec. surface comprises contacting the metal or dielec. surface with the above compn. for a time sufficient to remove the chem. residues. A method in accordance with the invention for chem. mech. polishing of a copper or aluminum surface comprises applying the above compn. to the copper or aluminum surface, and polishing the surface in the presence of the compn.

IT **148-24-3**, 8-Hydroxyquinoline, uses
RL: MOA (Modifier or additive use); USES (Uses)
(**chelating** agent; amine compd.-buffered org. acids for post clean treatment of metal or dielec. surfaces in manuf. of wafers)

RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **7440-50-8**, Copper, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(wafer blanket; amine compd.-buffered org. acids for post clean treatment of metal or dielec. surfaces in manuf. of wafers)

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

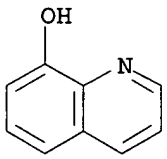
Cu

REFERENCE COUNT: 73 THERE ARE 73 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 8 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:192846 HCAPLUS
DOCUMENT NUMBER: 138:398595
TITLE: Susceptibility of enterococci to natural and synthetic iron chelators
AUTHOR(S): Lisiecki, Pawel; Mikucki, Jerzy
CORPORATE SOURCE: Zakl. Mikrobiol. Farm., Katedra Mikrobiol., Akad. Medyczna, Lodz, 90-235, Pol.
SOURCE: Medycyna Doswiadczalna i Mikrobiologia (2002), 54(4), 317-324
CODEN: MDMIAZ; ISSN: 0025-8601
PUBLISHER: Panstwowy Zaklad Higieny
DOCUMENT TYPE: Journal
LANGUAGE: Polish

AB A total of 79 strains of enterococci from 10 species were tested for susceptibility to 14 natural and synthetic iron chelators. All strains showed siderophore activity. The enterococci were susceptible only to 3 synthetic iron chelators: 8-hydroxyquinoline, disodium versenate (EDTA), and o-phenanthroline. They were resistant to all other synthetic chelators: ethylenediamine-di(o-hydroxyphenylacetic acid) (EDDHA), nitrilotriacetate, 2,2'-bipyridyl, salicylic acid and 8-hydroxyquinoline-5-sulfonic acid and to all natural chelators: ovotransferrin, human apotransferrin, horse apoferritin, desferrioxamine B, ferrichrome and rhodotorulic acid. The relations of susceptibility/resistance, iron assimilation, and structure and stability consts. of iron chelators are discussed.

IT **148-24-3**, 8-Hydroxyquinoline, biological studies **7439-89-6**, Iron, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(susceptibility of 79 strains from 10 Enterococcus species to 14 natural and synthetic iron **chelators**)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)

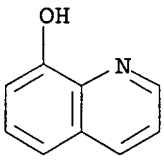


RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

L35 ANSWER 9 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:98995 HCAPLUS
DOCUMENT NUMBER: 138:255607
TITLE: Polymeric chelates of epoxy based polyesters containing oxine as pendent groups
AUTHOR(S): Shah, T. B.; Raj, L. M.; Dixit, R. B.
CORPORATE SOURCE: Department of Chemistry, Sardar Patel University,

Vallabh Vidyanagar, 388120, India
SOURCE: International Journal of Polymeric Materials (2003), 52(1), 9-20
CODEN: IJPMCS; ISSN: 0091-4037
PUBLISHER: Taylor & Francis Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Polymer chelates of epoxy based polyester ligands contg. oxine as pendent group, have been prepd. with different metal ions like Zn+2, Cu+2, Ni+2 and Co+2. These novel polymer ligands have been synthesized by condensation of 5-chloromethyl-8-quinolinol hydrochloride resp. with epoxy based prepolyhydroxy ester of succinic acid (EPPE-Su) and of sebacic acid (EPPE-Se) in presence of base catalyst. All these polymer ligands and polymer chelates are characterized by elemental analyses, IR and diffuse reflectance spectral studies for their structure detn. The thermal stability of all polymer chelates have been estd. by thermogravimetric analyses (TGA). Besides this, all the polychelates have also been characterized for their magnetic susceptibility and metal to ligand stoichiometry estn.
IT **148-24-3**, 8-Quinolinol, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(in prepn. of polymeric **chelates** of epoxy based polyesters contg. oxine as pendent groups)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **23713-49-7DP**, Zinc (+2), product with polyesters contg. oxine, preparation
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)
(prepn. of polymeric chelates of epoxy based polyesters contg. oxine as pendent groups)
RN 23713-49-7 HCAPLUS
CN Zinc, ion (Zn2+) (8CI, 9CI) (CA INDEX NAME)

Zn^{2+}

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 10 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:23106 HCAPLUS
DOCUMENT NUMBER: 138:83329
TITLE: Use of metal ion chelates in validating biological molecules as drug targets in test animal models
INVENTOR(S): Rist, Oystein; Hogberg, Thomas; Holst Lange, Birgitte; Schwartz, Thue W.; Elling, Christian E.
PATENT ASSIGNEE(S): 7TM Pharma A/S, Den.
SOURCE: PCT Int. Appl., 247 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003003009	A1	20030109	WO 2002-DK456	20020628
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LV, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
WO 2002054077	A2	20020711	WO 2001-DK867	20011221
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.:		
DK 2001-1026	A	20010629
DK 2001-1027	A	20010629
DK 2001-1028	A	20010629
DK 2001-1030	A	20010629
DK 2001-1031	A	20010629
US 2001-301931P	P	20010629
WO 2001-DK867	A	20011221
WO 2000-EP13389	W	20001229
DK 2001-536	A	20010330
US 2001-280237P	P	20010330

OTHER SOURCE(S): MARPAT 138:83329

AB The invention discloses the use of chem. compds. or selections of chem. compds. (libraries) of the general Formula R1XFY(R1)GZR1 [F, G = N, O, S, Se, P; X, Y, Z = (un)branched C1-12 alkyl, aryl, heteroaryl, etc.; R1 = ABC; A = coupling or connecting moiety; B = spacer moiety; C = functional group] for in vivo methods for testing or validating the physiol. importance and/or the therapeutic or pharmacol. potential of biol. target mols., notably proteins such as, e.g., receptors and esp. 7TM receptors in test animals expressing the biol. target mol. with, notably, a silent, engineered metal ion site. Use of specific metal ion binding sites of a generic nature in specific biol. target mols. such as, e.g. transmembrane proteins wherein the metal ion binding site is capable of forming a complex with a metal ion is also described. Also disclosed are chem. compds. or libraries suitable for use in methods for improving the in vivo pharmacokinetic behavior of metal ion chelates (e.g. the absorption pattern, the plasma half-life, the distribution, the metab. and/or the elimination of the metal ion chelates). In order to improve the efficacy of the impact of the metal ion chelate on the biol. target mol. after administration of the metal ion chelate in vivo to a test animal, it is

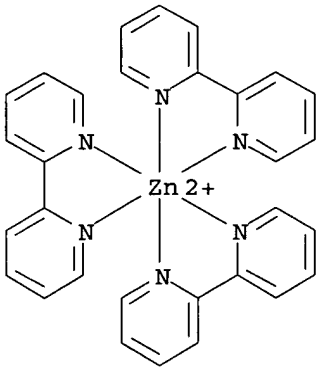
advantageous e.g. to increase the period during which the metal ion chelate is in the circulatory system and/or localized at the target. Further disclosed are metal ion-chelating compds. designed to be suitable for use in a target validation process according to the invention, as well as libraries of at least two or more of such metal ion-chelating compds.

IT **7646-85-7**, Zinc chloride, biological studies **16571-18-9** **28293-61-0** **139238-43-0**
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(metal ion chelates in validating biol. mols. as drug targets in test animal models)

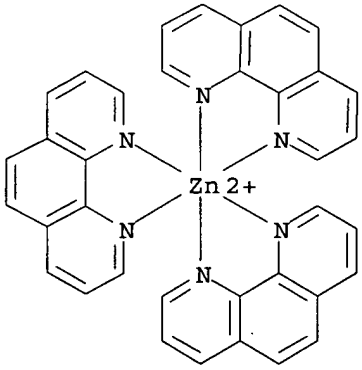
RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

RN 16571-18-9 HCAPLUS
CN Zinc(2+), tris(2,2'-bipyridine-.kappa.N1,.kappa.N1')-, (OC-6-11)- (9CI) (CA INDEX NAME)

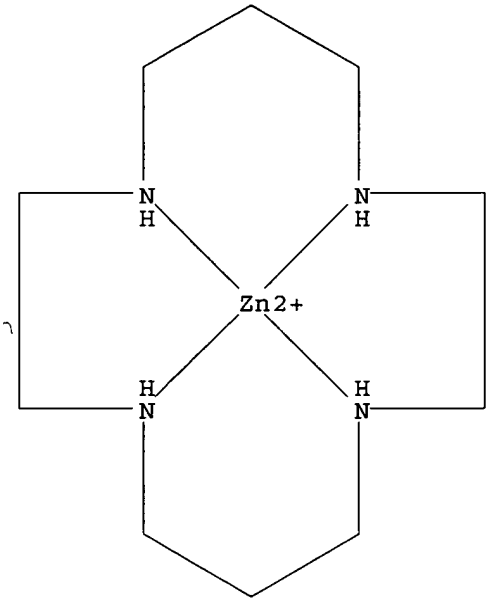


RN 28293-61-0 HCAPLUS
CN Zinc(2+), tris(1,10-phenanthroline-.kappa.N1,.kappa.N10)-, (OC-6-11)- (9CI) (CA INDEX NAME)

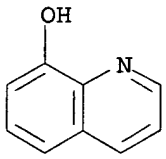


RN 139238-43-0 HCAPLUS
CN Zinc(2+), [rel-(1R,4R,8S,11S)-1,4,8,11-tetraazacyclotetradecane-

.kappa.N1,.kappa.N4,.kappa.N8,.kappa.N11]-, (SP-4-2)- (9CI) (CA INDEX NAME)



IT **148-24-3**, 8-Quinolinol, biological studies
RL: BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metal ion **chelates** in validating biol. mols. as drug targets in test animal models)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **7439-89-6D**, Iron, chelates **7439-96-5D**, Manganese, chelates **7439-98-7D**, Molybdenum, chelates **7440-48-4D**, Cobalt, chelates **7440-50-8D**, Copper, chelates **7440-66-6D**, Zinc, chelates **23713-49-7D**, Zinc II, chelates, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(metal ion chelates in validating biol. mols. as drug targets in test animal models)
RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7439-96-5 HCAPLUS
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

RN 7439-98-7 HCAPLUS
CN Molybdenum (8CI, 9CI) (CA INDEX NAME)

Mo

RN 7440-48-4 HCAPLUS
CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

RN 23713-49-7 HCAPLUS
CN Zinc, ion (Zn2+) (8CI, 9CI) (CA INDEX NAME)

Zn^{2+}

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L35 ANSWER 50 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:16806 HCAPLUS
DOCUMENT NUMBER: 124:163559
TITLE: Flow injection sorbent extraction of metals with activated carbon and its application to flame atomic absorption spectrometry
AUTHOR(S): Memon, M. Anwar; Wang, Xiaoru; Yang, Pengyuan; Huang, Benli
CORPORATE SOURCE: Department Chemistry, Xiamen University, Xiamen, 361005, Peop. Rep. China
SOURCE: Science International (Lahore) (1995), 7(1), 35-8
CODEN: SINTE8; ISSN: 1013-5316
PUBLISHER: Publications International
DOCUMENT TYPE: Journal

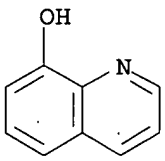
LANGUAGE: English

AB In the present study activated carbon was used as a sorbent material for the flow injection online sorbent extn. of metal ions combined with AA spectrometry. Online chelation of zinc was performed with 8-Hydroxyquinoline and the resultant metal chelate was adsorbed on the activated carbon, then desorbed with nitric acid and online detected with flame AAS. Various parameters affecting the zinc enrichment were optimized and the method was applied for the detn. of zinc in tap water, natural water, boiled water and tea samples. The results obtained with the present method were compared with those obtained by the ICP-AES.

IT **148-24-3**, 8-Hydroxyquinoline, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(**chelating** agent; zinc detn. in water and tea by flow injection sorbent extn. with activated carbon and flame at. absorption spectrometry)

RN 148-24-3 HCAPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **7440-66-6**, Zinc, analysis
RL: ANT (Analyte); ANST (Analytical study)
(zinc detn. in water and tea by flow injection sorbent extn. with activated carbon and flame at. absorption spectrometry)

RN 7440-66-6 HCAPLUS

CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

L35 ANSWER 51 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1995:930856 HCAPLUS

DOCUMENT NUMBER: 123:349636

TITLE: Separation and determination of Zr, Co, Al, Cu and Pd as 8-hydroxyquinoline chelates by RP-HPLC

AUTHOR(S): Ruan, Yuanping; Liu, Wenyuan; Tian, Xiaoqiang; Zhao, Hong

CORPORATE SOURCE: Dept. of Chem., Xiamen Univ., Xiamen, Peop. Rep. China

SOURCE: Xiamen Daxue Xuebao, Ziran Kexueban (1995), 34(4), 582-7
CODEN: HMHHAF; ISSN: 0438-0479

PUBLISHER: Xiamen Daxue

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB HQ (8-Hydroxyquinoline) was used as a precolumn chelating reagent for the RP-HPLC detn. of Zr (IV), Co(II), Al(III), Cu(II), and Pd(II). The metal-HQ chelates were sepd. on a YWG-CH column using a mobile phase of methanol-water (75 :25, vol./vol.) not contg. HQ and buffer. The detection sensitivities of the metal-HQ chelates at 254 nm were increased .gtoreq.5 times more than that at the VIS-range wavelength. The retentive

behavior of many metal-HQ chelates was studied. The conditions of the sepn. and detn. were optimized. The detection limits were: Zr 0.25, Co 0.038, Al 0.12, Cu 0.40, and Pd 0.28 ng. The method was applied to anal. the polluted water.

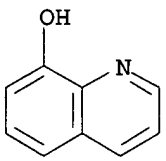
IT **7440-48-4**, Cobalt, analysis **7440-50-8**, Copper, analysis
RL: ANT (Analyte); ANST (Analytical study)
(sepn. and detn. in water as hydroxyquinoline chelates by RP-HPLC)
RN 7440-48-4 HCAPLUS
CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IT **148-24-3**, 8-Hydroxyquinoline, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(sepn. and detn. in water as hydroxyquinoline **chelates** by RP-HPLC)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



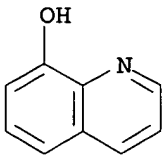
L35 ANSWER 52 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:836060 HCAPLUS
DOCUMENT NUMBER: 123:351670
TITLE: The Effect of High-Speed Stirring on the Distribution Equilibria of Neutral Metal Chelates
AUTHOR(S): Dietz, Mark L.; Sperline, Roger
CORPORATE SOURCE: Department of Chemistry, University of Arizona, Tucson, AZ, 85721, USA
SOURCE: Langmuir (1995), 11(10), 3766-71
CODEN: LANGD5; ISSN: 0743-7463
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English

AB When a 2-phase system comprising an org. soln. of any of various interfacially active neutral metal chelates in contact with an appropriate buffered aq. phase is agitated vigorously, a reversible decrease in the org. phase concn. of the chelate is obsd. This decrease gives rise to a shift in the pH1/2 value of the metal ion (i.e., the pH corresponding to 50% extn.) from that obsd. in the corresponding unstirred system. The magnitude of this shift varies with the distribution const. of the chelate, the interfacial area generated upon stirring, and the org.

solvent. In systems in which a pair of extractable metal chelates differing in interfacial activity is present, the shifts in pH1/2 alter the apparent selectivity of the chelating extractant and enhance the sepn. of the metal ions.

IT **148-24-3D**, 8-Quinolinol, transition metal **chelates**
7440-50-8, Copper, processes **7440-50-8D**, Copper, chelates
RL: PEP (Physical, engineering or chemical process); PROC (Process)
(high-speed stirring effect on neutral metal **chelate** distribution equil. in extn. systems)

RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

L35 ANSWER 53 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:589220 HCAPLUS
DOCUMENT NUMBER: 123:152413
TITLE: Synthesis and application of an inert type of 8-hydroxyquinoline-based chelating ion exchanger for sea-water analysis using online inductively coupled plasma mass spectrometry detection
AUTHOR(S): Seubert, A.; Petzold, G.; McLaren, J. W.
CORPORATE SOURCE: Inst. Anorg. Chem., Univ. Hannover, Hannover, D-30167, Germany
SOURCE: Journal of Analytical Atomic Spectrometry (1995), 10(5), 371-9
CODEN: JASPE2; ISSN: 0267-9477
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

AB An inert type of chelating ion exchanger was prepd. by Friedel-Crafts alkylation of 8-hydroxyquinoline (8-HQ) with a previously chloromethylated polystyrene-divinylbenzene (PS/DVB) co-polymer. This type of Friedel-Crafts alkylation using a polymer alkylhalogenid results in an exchange capacity of 2.8 .mu.mol Cu2+/mL bed vol. Because of the high formation consts. of most transition and heavy metal ion complexes with

8-HQ, the low exchange capacity is still sufficient to preconcn. a wide variety of ions from a high ionic strength sample such as seawater. Introduction of a high-performance cation-exchange column into the elution flow-path significantly enhanced the method's selectivity. From an initial set of 32 elements, it is possible to preconcn. 25 elements with a recovery of at least 50%. The majority of trace elements show a recovery of 60-90%. Introduction of a cation-exchange column into the elution flow path eliminated several remaining interferences. The basic performance, such as recovery and elution behavior, and first results of applied anal. of seawater using the Nearshore Seawater Ref. Material for Trace Metals, CASS-2 (National Research Council of Canada) are given. Online detection using inductively coupled plasma mass spectrometry allows trace anal. at the low ng/L range in seawater, which is the normal concn. level for most trace elements.

IT **7439-89-6**, Iron, analysis **7439-96-5**, Manganese, analysis
7440-48-4, Cobalt, analysis **7440-50-8**, Copper, analysis
7440-66-6, Zinc, analysis
RL: ANT (Analyte); ANST (Analytical study)
(trace element detn. in seawater by online inductively coupled plasma mass spectrometry following preconcn. on 8-hydroxyquinoline-based chelating ion exchanger)

RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7439-96-5 HCAPLUS
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

RN 7440-48-4 HCAPLUS
CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

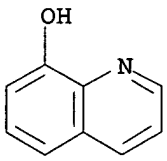
Cu

RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

IT **148-24-3**, 8-Hydroxyquinoline, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(trace element detn. in seawater by online inductively coupled plasma

mass spectrometry following preconcn. on 8-hydroxyquinoline-based **chelating** ion exchanger)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



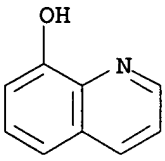
L35 ANSWER 54 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:452276 HCAPLUS
DOCUMENT NUMBER: 122:196566
TITLE: Cosmetic composition containing alpha hydroxy acids and chelating agents
INVENTOR(S): Bartolone, John; Rawlings, Anthoney Vincent; Sabin, Robert
PATENT ASSIGNEE(S): Unilever PLC, UK; Unilever NV
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9503032	A1	19950202	WO 1994-EP2456	19940723
W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN				
RW: KE, MW, SD, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2161525	AA	19950202	CA 1994-2161525	19940723
AU 9475327	A1	19950220	AU 1994-75327	19940723
EP 711144	A1	19960515	EP 1994-925390	19940723
R: CH, DE, ES, FR, GB, IT, LI, NL, SE				
IN 182731	A	19990703	IN 1994-BO351	19940803
PRIORITY APPLN. INFO.:			US 1993-96878 A	19930726
			WO 1994-EP2456 W	19940723

am 7.

AB A skin treatment compn. is provided comprising an alpha hydroxy acid, a salt or ester thereof, and a chelating agent. The chelating agent is selected from the group having an affinity with zinc ion of greater than 9.2, and an affinity with magnesium ion of greater that 1.9. The efficacy of 300mM 2-hydroxyoctanoic acid and 5mm hydroxyquinoline in corneocyte release assay was shown. A topical skin compn. contained procetyl AWS 6.3, proglyceryl-6-oleate 14.7, Labrasol 17.6, water 0.166, 99% L-lactic acid 9.524, EDTA 0.2, Schercemol 185 20.68, Trivent OC-16 16.28, Silicone fluid 344 8.8, squalene 5.5, ceramide II 0.25%.
IT **148-24-3**, 8-Hydroxyquinoline, biological studies
23713-49-7, Zinc ion, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(cosmetic compn. contg. alpha hydroxy acids and **chelating**

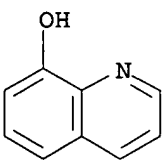
agents)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 23713-49-7 HCAPLUS
CN Zinc, ion (Zn2+) (8CI, 9CI) (CA INDEX NAME)

Zn^{2+}

L35 ANSWER 55 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:333887 HCAPLUS
DOCUMENT NUMBER: 123:153959
TITLE: Studies of ferric chelate compounds by using Cu-ISEs
AUTHOR(S): Wei, Changming; Chen, Lianshan; Ma, Guizhi; He, Zhonglin
CORPORATE SOURCE: Dep. Pharmaceatics, Jiamushi Academiae Medicinae, Jiamushi, 154001, Peop. Rep. China
SOURCE: Liaoning Shifan Daxue Xuebao, Ziran Kexueban (1994), 17(3), 217-21
CODEN: LSDKEQ; ISSN: 1000-1735
PUBLISHER: Liaoning Shifan Daxue
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
AB Cu-ISEs is used in this study to examine ferric-Tiron and ferric-oxine chelate compds. It is found that a 1:1 complex for ferric-Tiron in pH = 2.1 and 1:1 and 1:2 complexes for ferric-oxine in pH = 3.08 are formed. The compn. and the apparent stability consts. of these complexes can be calcd. from the data of concn. cells with the potentiometric titrn., using our previous work .DELTA.E = E1 - E2 = RTnFln.PHI., where .PHI. is apparent complexion function.
IT **148-24-3**, Oxine, properties **7439-89-6D**, Iron, chelate compds.
RL: PRP (Properties)
(studies of ferric **chelate** compds. by using Cu-ISEs)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7439-89-6 HCAPLUS

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

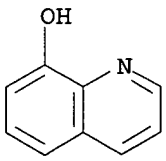
Fe

L35 ANSWER 56 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:195188 HCAPLUS
DOCUMENT NUMBER: 122:204025
TITLE: One-drop flame atomic absorption spectrometry of metals using direct nebulization of chlorinated hydrocarbon extracts of metal chelates
AUTHOR(S): Kojima, Isao; Inagaki, K.; Kondo, S.
CORPORATE SOURCE: Laboratory of Analytical Chemistry, Nagoya Institute of Technology, Nagoya, 466, Japan
SOURCE: Journal of Analytical Atomic Spectrometry (1994), 9(10), 1161-5
CODEN: JASPE2; ISSN: 0267-9477
PUBLISHER: Royal Society of Chemistry
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The flame at. absorption spectrometric behavior of metals extd. into nonflammable chlorinated hydrocarbon solvents (dichloromethane, chloroform and carbon tetrachloride) as their neutral chelates or as ion-paired complexes was studied by a 1-drop method with direct nebulization of small vols. of org. exts. and with deuterium background correction. Direct nebulization of org. exts. into a fuel-lean air-acetylene flame gave interesting background-cor. signal profiles, depending on the metals and not depending on extn. agents and solvents. The signal profiles were roughly correlated with the charring and atomizing temps. of the metals in electrothermal at. absorption spectrometry and with the dissocn. energies of the metal monoxides. Direct nebulization into a dinitrogen oxide-acetylene flame gave a simple signal profile, not dependent on the metals. Direct injection of 20-40 .mu.L aliquots of org. exts. of Co, Cu, Fe, Mg, Mn and Ni chelates into an air-acetylene flame gave the max., const. and reproducible spike-like signals. Direct nebulization of .apprx.50 .mu.L of org. exts. of Ag, Cd, Pb and Zn chelates also gave very sensitive spike-like signals, compared with those obtained by nebulization of aq. metal solns. With the combined use of extn. concn., this small injection vol. of .ltorsim.60 .mu.L resulted in a very sensitive and reproducible flame at. absorption spectrometric detn. of trace amts. of Ag, Cd, Pb and Zn in sold samples without deuterium background correction.

IT **148-24-3**, Quinolin-8-ol, uses
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(in one-drop flame at. absorption spectrometry of metals using direct nebulization of chlorinated hydrocarbon exts. of metal **chelates**
)

RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **7439-89-6**, Iron, analysis **7439-96-5**, Manganese, analysis
7440-48-4, Cobalt, analysis **7440-50-8**, Copper, analysis
7440-66-6, Zinc, analysis
RL: ANT (Analyte); ANST (Analytical study)
(one-drop flame at. absorption spectrometry of metals using direct nebulization of chlorinated hydrocarbon exts. of metal chelates)
RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7439-96-5 HCAPLUS
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

RN 7440-48-4 HCAPLUS
CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

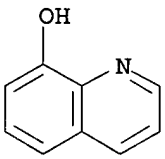
L35 ANSWER 57 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:89981 HCAPLUS
DOCUMENT NUMBER: 122:234084
TITLE: The comparison of alkaline phosphatase isoenzymes of blood samples obtained from different human groups
AUTHOR(S): Gezici, Metin; Ozdemir, Yuksel
CORPORATE SOURCE: Tip Fak., F.U., Turk.
SOURCE: Biyokimya Dergisi (1993), 18(3), 1-11
CODEN: BIDEDV; ISSN: 0250-4685
DOCUMENT TYPE: Journal
LANGUAGE: Turkish
AB This study was done to obtain information about alk. phosphatase isoenzymes from blood samples which were taken from adult, child (age 7-8 yr), maternal, and cord blood groups and were inhibited by heat and chem. substances (EDTA or 8-hydroxyquinoline) or reactivated by chem. substances ($ZnSO_4$). The levels of alk. phosphatase activity in serum and plasma samples were detd. for these groups and measured with the

p-nitrophenylphosphate method following heat, chem. inhibition with EDTA, 8-hydroxyquinoline and reactivation with ZnSO4. According to the initial enzyme activity levels, the values obtained with inhibition and reactivation were calcd. as a percentage of remainder activity. EDTA and 8-hydroxyquinoline decreased the total activity of alk. phosphatase levels. Following the inhibition with EDTA and 8-hydroxyquinoline, the highest level of reactivation with ZnSO4 was seen in maternal and adult groups, resp. It was obsd. that 8-hydroxyquinoline, as a chelator, does not affect the Zn+ concn. Statistical evaluation of these groups indicated; inhibition by EDTA and 65.degree.C were similar for blood samples from different human groups. It is thought that the Zn+2 affinity for placental alk. phosphatase and placental-like alk. phosphatase isoenzymes is lower than other alk. phosphatase isoenzymes.

IT **7440-66-6**, Zinc, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(activator; comparison of alk. phosphatase isoenzymes of blood samples obtained from different human groups)
RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

IT **148-24-3**, 8-Hydroxyquinoline, biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(**chelator**; comparison of alk. phosphatase isoenzymes of blood samples obtained from different human groups)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



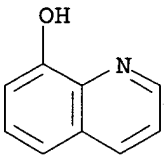
L35 ANSWER 58 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1994:667546 HCAPLUS
DOCUMENT NUMBER: 121:267546
TITLE: Cu(II) chelates with nitrogen-, oxygen- and sulfur-containing ligands as inhibitors of "aging" of silver halide photographic layers
AUTHOR(S): Mikhailov, Oleg V.
CORPORATE SOURCE: Kazan State Technological University, Kazan, 420015, Russia
SOURCE: Journal of Imaging Science and Technology (1994), 38(3), 234-40
CODEN: JIMTE6; ISSN: 1062-3701
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The influence of Cu(II) chelate complexes with nitrogen-, oxygen-, and sulfur-contg. org. ligands on the spontaneous redn. of silver halides in

thin gelatin layers has been studied. It has been shown that decisive factors of this influence are the ability of Cu(II) complexes to oxidize the elemental silver, their ability to adsorb onto silver halide microcrystals, and the inhibiting action of the ligands. The character of the influence of Cu(II) complexes with the ligands studied on the above-mentioned process has been investigated.

IT **148-24-3D**, 8-Hydroxyquinoline, copper(II) complex
7440-50-8D, Copper, complexes with nitrogen-, oxygen- and sulfur-contg. ligands
RL: PRP (Properties)
(copper(II) **chelates** as aging inhibitors of silver halide photog. layers)

RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

L35 ANSWER 59 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1994:643947 HCAPLUS
DOCUMENT NUMBER: 121:243947
TITLE: Manufacture of oxide magnetic powder
INVENTOR(S): Okabe, Kazumi
PATENT ASSIGNEE(S): Murata Manufacturing Co, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 06215925	A2	19940805	JP 1993-20660	19930112

PRIORITY APPLN. INFO.: JP 1993-20660 19930112

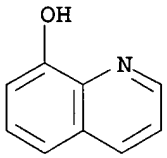
AB In manuf. of MFe_2O_4 (M = bivalent Ni, Zn, Mn, and/or Co) powder, complex chelates, obtained by reaction of 8-hydroxyquinoline and the oxide-forming metal ions, are heat treated at 450-700.degree.. The obtained powder have high surface activity, easy sinterability, and uniform and small particle size.

IT **106389-78-0P**, Nickel zinc ferrite
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
(manuf. of magnetic powder by pyrolysis of hydroxyquinoline complex chelates)

RN 106389-78-0 HCAPLUS
CN Iron nickel zinc oxide (Fe2(Ni,Zn)O4) (9CI) (CA INDEX NAME)

Component	Ratio	Component Registry Number
O	4	17778-80-2
Zn	0 - 1	7440-66-6
Ni	0 - 1	7440-02-0
Fe	2	7439-89-6

IT **148-24-3DP**, 8-Hydroxyquinoline, metal complexes
7439-96-5DP, Manganese, hydroxyquinoline complexes
7440-48-4DP, Cobalt, hydroxyquinoline complexes
7440-66-6DP, Zinc, hydroxyquinoline complexes
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(manuf. of magnetic powder by pyrolysis of hydroxyquinoline complex **chelates**)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7439-96-5 HCAPLUS
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

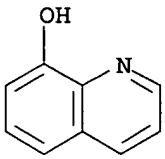
RN 7440-48-4 HCAPLUS
CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

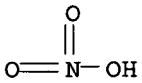
RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

IT **148-24-3**, 8-Hydroxyquinoline, reactions **7779-88-6**, Zinc nitrate
RL: RCT (Reactant); RACT (Reactant or reagent)
(starting material; manuf. of magnetic powder by pyrolysis of hydroxyquinoline complex **chelates**)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7779-88-6 HCAPLUS
CN Nitric acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

L35 ANSWER 60 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1994:483530 HCAPLUS
DOCUMENT NUMBER: 121:83530
TITLE: Studies in the substituted and unsubstituted 8-hydroxyquinoline-4-(N-p-chloromethylphenyl)sulfonamide metal chelates: synthetic and bacteriological
AUTHOR(S): Tiwari, G. D.; Tripathi, Archana; Tiwari, Anuradha; Pandey, Madhuri; Mishra, Vidhyut; Kumari, Om
CORPORATE SOURCE: Dep. Chem., V.S.S.D. Coll., Kanpur, India
SOURCE: Journal of the Indian Chemical Society (1993), 70(2), 156
CODEN: JICSAH; ISSN: 0019-4522
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Title chelates I (M = Cu, Fe, Co, Cd) were prepd. and were active bactericides.
IT **7439-89-6DP**, Iron, hydroxylquinoline sulfonamide complexes
7440-48-4DP, Cobalt, hydroxylquinoline sulfonamide complexes
7440-50-8DP, Copper, hydroxylquinoline sulfonamide complexes
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(prepn. and bactericidal activity of)
RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

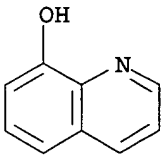
RN 7440-48-4 HCAPLUS
CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

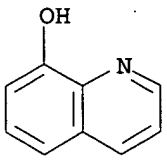
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IT **148-24-3P**, 8-Hydroxyquinoline, reactions
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(prepn. and sulfonamidation of, metal **chelates** as antibacterials from)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L35 ANSWER 100 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1984:590343 HCAPLUS
DOCUMENT NUMBER: 101:190343
TITLE: A simple plant nutrient solution purification method for effective removal of trace metals using controlled pore glass-8-hydroxyquinoline chelation column chromatography
AUTHOR(S): Eskew, David L.; Welch, Ross M.; Cary, Earle E.
CORPORATE SOURCE: Soil Nutr. Lab., Agric. Res. Serv., Ithaca, NY, 14853, USA
SOURCE: Plant Physiology (1984), 76(1), 103-5
CODEN: PLPHAY; ISSN: 0032-0889
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Column chelation chromatog. on controlled pore glass-8-hydroxyquinoline was a very efficient method for removing trace metal contaminants from concd. macronutrient salt solns. used to prep. nutrient media. With 63Ni and 65Zn, controlled pore glass-8-hydroxyquinoline column packings retained 99.9% of the radiotracer, and quant. recovery of the radioisotopes from these columns was obtained by eluting with 1.2N HCl. This method has several advantages over liq.-liq. extn. methods of purifn. which previously have been used in plant micronutrient research.
IT **148-24-3**, uses and miscellaneous
RL: USES (Uses)
(in **chelation** column chromatog., for trace metal removal from plant nutrient soln.)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **7440-66-6**, uses and miscellaneous
RL: REM (Removal or disposal); PROC (Process)
(removal of, from plant nutrient solns. by chelation column chromatog.)
RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

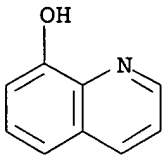
Zn

L35 ANSWER 101 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1984:185755 HCAPLUS
DOCUMENT NUMBER: 100:185755
TITLE: Phenolic ethylenediamine derivatives: a study of orally effective iron chelators
AUTHOR(S): Hershko, Chaim; Grady, Robert W.; Link, Gabriela
CORPORATE SOURCE: Hadassah Med. Sch., Heb. Univ., Jerusalem, Israel
SOURCE: Journal of Laboratory and Clinical Medicine (1984), 103(3), 337-46
CODEN: JLCMAK; ISSN: 0022-2143
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Of 35 potential iron chelators screened for in vivo activity in rats, a group of phenolic compds. with excellent chelating properties were identified. These included N,N'-ethylene-bis(o-hydroxyphenylglycine) (EHPG) [1170-02-1], NN'-Bis(o-hydroxybenzyl)-ethylenediamine diacetic acid (HBED) [303-38-8], and their resp. di-Me esters (dmEHPG [90044-13-6] and dmHBED [85120-52-1]. All 4 phenolic compds. produced a marked increase in the fecal excretion of hepatocellular radioiron. This amounted to 42% of total body radioactivity with dmEHPG, 58% with EHPG, 60% with HBED, and 80% with dmHBED after a single injection of 40 mg/animal. At a dose of 5 mg/animal, EHPG, HBED, and dmHBED were 9, 12, and 15 times more potent, resp., than deferoxamine. Both di-Me esters showed significant oral activity: oral dmEHPG retained 1/3 and dmHBED retained 2/3 of the effect of the same dose given by i.m. injection. The ester dmHBED combines oral effectiveness with superior chelating ability, selective hepatocellular action, and low apparent toxicity. It may represent a significant advance in the development of new iron-chelating drugs.
IT **7439-89-6**, biological studies
RL: BIOL (Biological study)
(chelators, phenolic ethylenediamine derivs. as)
RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

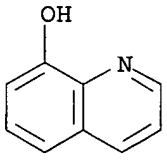
Fe

IT **148-24-3**, biological studies

RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(iron-**chelating** activity of)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L35 ANSWER 102 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1984:28959 HCAPLUS
DOCUMENT NUMBER: 100:28959
TITLE: Studies on the chelating agent-impregnated resins for the adsorption and separation of metal ions. I. 8-Hydroxyquinoline-impregnated resins
AUTHOR(S): Lee, Dai Woon; Lee, Tack Hyuck; Park, Kwang Ha
CORPORATE SOURCE: Dep. Chem., Yonsei Univ., Seoul, 120, S. Korea
SOURCE: Taehan Hwahakhoe Chi (1983), 27(5), 353-60
CODEN: DHWHAB; ISSN: 0418-2472
DOCUMENT TYPE: Journal
LANGUAGE: Korean
AB The adsorption behavior of 8-hydroxyquinoline (8HQ) on Amberlite XAD-4 and XAD-7 resins was investigated by measuring its distribution coeffs. under various exptl. conditions, such as shaking time, pH, and concn. of MeOH in the medium. The application of 8HQ-impregnated-XAD resins for the adsorption and sepn. of metal ions was studied. The max. adsorption of 8HQ on XAD resins was obsd. in 30% MeOH soln. at pH 6.0-9.0. The impregnation capacities of XAD resins for 8HQ were 3.81 .times. 10-2 and 2.60 .times. 10-2 mmol 8HQ/g, XAD-4 and XAD-7 resin, resp. The 8HQ-impregnated-XAD resins were stable at pH 6.0-10.0 and the amt. of 8HQ leached from XAD-4 resin by eluting with 5M HCl was negligible. The optimum pH range for the adsorption of metal ions on 8HQ-impregnated XAD resin was also 6.0-10.0, and the adsorption mole ratio of metal ion to 8HQ was 1:2 for Cu(II), Cd(II), and Ni(II), and 1:3 for Fe(III) at the above pH range. The absorbed metal ions were recovered quant. with 5M HCl and 8HQ-impregnated-XAD-4 resin could be reused >5 times without decrease in its impregnation capacity.
IT **148-24-3**, uses and miscellaneous
RL: USES (Uses)
(Amberlite XAD-4 and XAD-7 impregnated with, as **chelating** ion exchanger for sepn. of transition metals)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



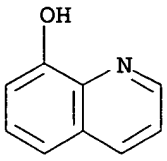
IT **7439-89-6**, analysis **7440-50-8**, analysis
RL: ANST (Analytical study)
(sepn. of, by ion-exchange chromatog. on hydroxyquinoline-impregnated Amberlite XAD resins)
RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

L35 ANSWER 103 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1984:28951 HCAPLUS
DOCUMENT NUMBER: 100:28951
TITLE: Chromatography of metal chelates. VII. Thin-layer chromatography of metal chelates of 8-mercaptoquinoline and its coordination site derivatives
AUTHOR(S): Schneeweis, G.; Koenig, K. H.
CORPORATE SOURCE: Inst. Anorg. Chem., Univ. Frankfurt/Main, Frankfurt/Main, D-6000/50, Fed. Rep. Ger.
SOURCE: Fresenius' Zeitschrift fuer Analytische Chemie (1983), 316(1), 16-22
CODEN: ZACFAU; ISSN: 0016-1152
DOCUMENT TYPE: Journal
LANGUAGE: German
AB The influence of different coordination sites at the quinoline structure on the formation of metal chelates and their thin-layer chromatog. is examd. with metal chelates of 8-hydroxyquinoline, 8-mercaptoquinoline, 8-selenoquinoline, 8-hydroxyquinoline N-oxide, 8-mercaptoquinoline N-oxide, 2-hydroxyquinoline N-oxide, and 2-mercaptoquinoline N-oxide. Metal chelates with the coordination sites S, N or S, O can be chromatographed very well, whereas metal chelates with the coordination sites N, O or O, O are adsorbed irreversibly or show strong tailing. Silica gel 60 and Al2O3 60 were used as the stationary phase. The mobile phases were CH2Cl2, CHCl3, benzene, toluene, or CCl4. Detection was by UV spectrometry.
IT **148-24-3D**, metal **chelates 7439-89-6D**, 2-hydroxyquinoline and 2-mercaptoquinoline N-oxide complexes **7439-96-5D**, 2-hydroxyquinoline N-oxide complexes **7440-48-4D**, 2-hydroxyquinoline and 2-mercaptoquinoline N-oxide complexes **7440-50-8D**, 2-hydroxyquinoline and 2-mercaptoquinoline N-oxide complexes **7440-66-6D**, 2-hydroxyquinoline and 2-mercaptoquinoline N-oxide complexes **14494-70-3** **14654-50-3 17926-52-2 68811-26-7**
RL: ANT (Analyte); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
(thin-layer chromatog. of)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7439-96-5 HCAPLUS
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

RN 7440-48-4 HCAPLUS
CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

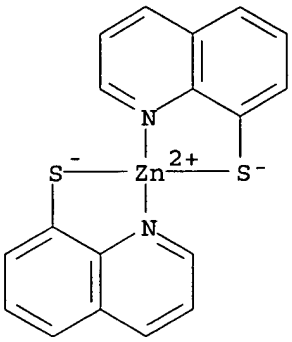
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

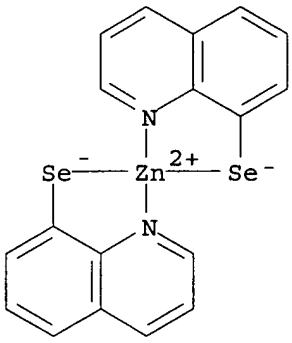
RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

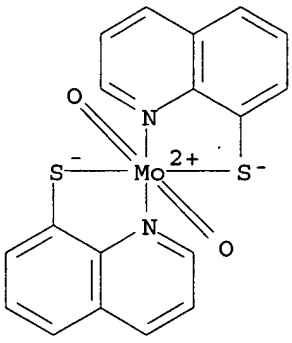
RN 14494-70-3 HCAPLUS
CN Zinc, bis(8-quinolinethiolato-.kappa.N1,.kappa.S8)-, (T-4)- (9CI) (CA INDEX NAME)



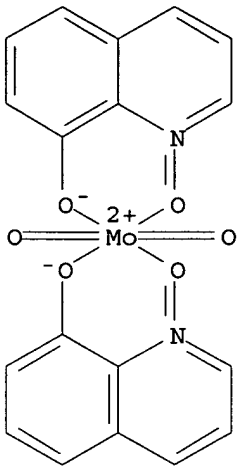
RN 14654-50-3 HCAPLUS
CN Zinc, bis(8-quinolineselenolato-.kappa.N1,.kappa.Se8)-, (T-4)- (9CI) (CA INDEX NAME)



RN 17926-52-2 HCAPLUS
CN Molybdenum, dioxobis(8-quinolinethiolato-N1,S8)- (9CI) (CA INDEX NAME)



RN 68811-26-7 HCAPLUS
CN Molybdenum, dioxobis(8-quinolinol 1-oxidato-O,O')- (9CI) (CA INDEX NAME)



L35 ANSWER 104 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1983:593198 HCAPLUS
DOCUMENT NUMBER: 99:193198
TITLE: Removal of impurities from beverages
INVENTOR(S): Loubser, Gert Jacobus
PATENT ASSIGNEE(S): Stellenbosch Farmers Winery Ltd., S. Afr.
SOURCE: S. African, 14 pp.
CODEN: SFXXAB
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

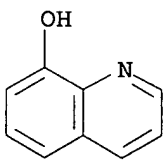
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
ZA 8103988	A	19830126	ZA 1981-3988	19810612

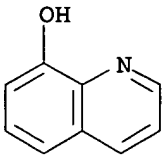
PRIORITY APPLN. INFO.: ZA 1980-1521 19800314

AB Fe, Cu, or H2S are removed from beverages by passing the beverage through a column of resin beads contg. the appropriate **chelating** group. Thus, 4 g Duolite ES-365 [87659-17-4] ion-exchange resin beads was treated to contain the functional groups of 8-hydroxyquinoline [**148-24-3**]. Two liters of wine contg. 50 ppm Fe and 10 ppm Cu was passed through the column at a rate of 7 bed vols./h. The Fe and Cu contents were reduced to <1 and <0.1 ppm, resp., with no change of pH or sensory properties. The same resin beads satd. with Cu removed H2S from wine.

IT **148-24-3**, uses and miscellaneous
RL: BIOL (Biological study)
(ion exchanger treated with, beverage treatment with)

RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)





IT **7439-89-6**, biological studies **7440-50-8**, biological studies
RL: REM (Removal or disposal); PROC (Process)
(removal of, from beverages with chelating resin)
RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

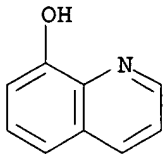
Cu

L35 ANSWER 105 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1983:517401 HCAPLUS
DOCUMENT NUMBER: 99:117401
TITLE: Evaluation of some physicochemical techniques for the determination of the fraction of dissolved copper toxic to the marine diatom Nitzschia closterium
AUTHOR(S): Florence, T. M.; Lumsden, B. G.; Fardy, J. J.
CORPORATE SOURCE: Div. Energy Chem., CSIRO, Sutherland, NSW 2232, Australia
SOURCE: Analytica Chimica Acta (1983), 151(2), 281-95
CODEN: ACACAM; ISSN: 0003-2670
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The toxicity of Cu to N. closterium was detd. by growth rate measurements in the presence of several Cu complexing agents, both natural and synthetic. The measurements were made in raw, unenriched sea water to avoid the reaction of Cu with silicate or colloidal hydrated Fe2O3 which occurs in std. culture media. The algae remained in exponential growth for at least 72 h in unenriched sea water and, in the presence of Cu, produced an exudate which decreased the concn. of labile Cu. Labile Cu was measured in the algal assay solns. by using anodic stripping voltammetry (a.s.v.) at different deposition potentials, by sepn. on iminodiacetate (Chelex-100) and thiol resins, and by extn. with hexane/n-BuOH (9:1) to simulate lipid soly. No consistent correlation was obsd. between the toxic fraction of Cu measured by algal assay, and the labile Cu detd. by the physicochem. techniques. Although some of the naturally occurring ligands (e.g, fulvic acid and Fe-humic acid colloid) gave reasonable agreement between the toxic fraction and a.s.v.-labile Cu, the **chelating** resins usually grossly overestimated toxicity. Lipid-sol. complexes of Cu with synthetic ligands (e.g., 8-quinolinol [**148-24-3**] and diethyldithiocarbamic acid [147-84-2]) were highly toxic; as little as 2 .mu.g Cu/L in the presence of 5 .times. 10-8M

8-quinolinol caused complete depression of algal growth. Apparently, the extreme toxicity of lipid-sol. Cu complexes results from their ability to catalyze the intercellular formation of highly destructive hydroxyl free radicals from mol. O, in a Fenton-type reaction.

IT **148-24-3**, biological studies **7439-89-6D**, humic acid complexes
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
(copper toxicity to marine diatom response to)

RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

IT **7440-50-8**, biological studies
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(toxicity of, to marine diatom, complexing agents effect on)

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

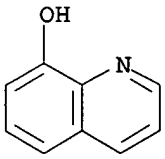
Cu

L35 ANSWER 106 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1983:508573 HCAPLUS
DOCUMENT NUMBER: 99:108573
TITLE: Recovery of metals from electroplating wastes using liquid-liquid extraction
AUTHOR(S): Clevenger, Tom E.; Novak, John T.
CORPORATE SOURCE: Environ. Trace Subst. Res. Cent., Univ. Missouri, Columbia, MO, USA
SOURCE: Journal - Water Pollution Control Federation (1983), 55(7), 984-9
CODEN: JWPFA5; ISSN: 0043-1303
DOCUMENT TYPE: Journal
LANGUAGE: English

AB **Chelating** agents were used in liq.-liq. extn. for Ni, Cu, Cr, Cd, and Zn sepn. and recovery. The **chelating** compds. used were acetylacetone [123-54-6] thenoyltrifluoracetone [326-91-0], Na-diethyldithiocarbamate [148-18-5], and 8-hydroxyquinoline [**148-24-3**]. Because none of these **chelating** compds. individually were capable of selectively sepg. all of the 5 elements of interest, their capabilities were studied by using them together and in

different sequential extn. schemes. A severe economic limitation to this recovery method was the inability of any of the **chelating** agents to be reused once they had been stripped with HCl because of loss of extn. capabilities.

IT **148-24-3**, uses and miscellaneous
RL: USES (Uses)
(in metal recovery from electroplating waste)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **7440-50-8P**, preparation **7440-66-6P**, preparation
RL: PUR (Purification or recovery); PREP (Preparation)
(recovery of, from electroplating wastes, by liq.-liq. extn., with chelating agents)
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

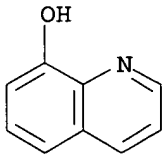
L35 ANSWER 107 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1983:137586 HCAPLUS
DOCUMENT NUMBER: 98:137586
TITLE: In vivo evaluation of new iron chelating drugs
AUTHOR(S): Hershko, C.; Grady, R. W.; Link, G.; Sarel, S.; Avramovici-Grisaru, S.
CORPORATE SOURCE: Dep. Med., Shaare Zedek Med. Cent., Jerusalem, Israel
SOURCE: Biochem. Physiol. Iron, Proc. Int. Conf. Proteins Iron Storage Transp., 5th (1982), Meeting Date 1981, 627-48. Editor(s): Saltman, Paul; Hegenauer, Jack. Elsevier: New York, N. Y.
CODEN: 49AHA2
DOCUMENT TYPE: Conference
LANGUAGE: English
AB To det. the ability of 21 compds. to enhance the excretion of chelated Fe, 59FeCl3 in tracer amts. was incubated in vitro with 10 mg of each compd. and injected s.c. into rats. With these compds., urinary and fecal excretion of radioactivity was identical with or greater than spontaneous excretion in untreated control animals. The organ distribution of retained radioactivity was identical with the distribution of radioactivity in untreated controls, indicating free exchange of injected

radioiron with transferrin. Combined urinary and fecal radioiron excretion was similar to that obtained with Desferal [70-51-9] in 7 of the 21 compds. tested. However, unlike Desferal, most compds. caused significant fecal excretion. A discussion and review of the development of selective radioiron probes for the study of storage Fe behavior, animal models for studying the interaction of Fe chelating drugs with different storage pools, and studies of the mechanism of Fe chelation in man are presented.

IT **7439-89-6**, biological studies
RL: BIOL (Biological study)
(chelators, screening of)
RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

IT **148-24-3**, biological studies
RL: BIOL (Biological study)
(iron **chelation** therapy with)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



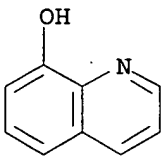
L35 ANSWER 108 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1983:29159 HCAPLUS
DOCUMENT NUMBER: 98:29159
TITLE: Study of the toxic effect of chelators to the hippocampus
AUTHOR(S): Toroptsev, I. V.; Eshchenko, V. A.
CORPORATE SOURCE: Med. Inst., Tomsk, USSR
SOURCE: Farmakologiya i Toksikologiya (Moscow) (1982), 45(6), 82-4
CODEN: FATOAO; ISSN: 0014-8318
DOCUMENT TYPE: Journal
LANGUAGE: Russian

AB dithizone [60-10-6], 8-(p-toluoylsulfonilamino)quinoline [10304-39-9], 8-(benzenesulfonylamino)quinoline (I) [16082-59-0] and oxine [**148-24-3**] at 10-100 mg/kg and Na diethyldithiocarbamate [148-18-5] at 0.5-1 g/kg caused biphasic behavior response in mice. The 1st phase of the response was increased motor activity and the highest activity was due to I. Intensification of the motor activity and assocd. convulsions was independent of the in vitro reaction of the **chelators** with Zn in hippocampal synapses. The 2nd phase of the response was characterized by a decrease in the motor activity; the animals tended to localize in places. The extent of redn. in the motor activity correlated with the degree of in vitro histochem. reaction of the **chelates** with Zn in Ammon's horn. In the 2nd phase, the Zn concn. decreased in hippocampal synapses.

IT **7440-66-6**, biological studies
RL: BIOL (Biological study)
(chelating agents binding with, hippocampus toxicity in relation to)
RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

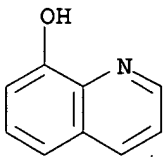
IT **148-24-3**, biological studies
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(toxicity of, to hippocampus, zinc complexation in relation to)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L35 ANSWER 109 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1982:616859 HCAPLUS
DOCUMENT NUMBER: 97:216859
TITLE: Studies on the polymer reaction of chloromethyl polystyrene. III. Preparation of ethylenediamine ligand type and aminomethylhydroxyquinoline type chelate resins
AUTHOR(S): Park, Soo Young; Hong, Sung Il
CORPORATE SOURCE: Coll. Eng., Seoul Natl. Univ., Seoul, S. Korea
SOURCE: Polymer (Korea) (1982), 6(5), 323-35
CODEN: POLLDG; ISSN: 0379-153X
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Insol. divinylbenzene styrene copolymer [9003-70-7] beads were obtained by std. suspension polymn. techniques. These beads were chloromethylated with ClCH2OMe in the presence of anhyd. ZnCl2. Alternatively, chloromethylated polystyrene beads were prepd. by the homopolymn. of chloromethylstyrene(I) or by the copolymn. of I with styrene and divinylbenzene. The chloromethylated polystyrenes were reacted with ethylenediamine in DMF/water soln. to obtain diamine ligand-type chelate resins. In the reaction of the chloromethyl group with ethylenediamine, site-site interactions were investigated. Cu2+ chelation capacity was detd. by the batch equilibration method at pH 5. Aminomethylhydroxyquinoline-type chelate resin was prepd. by the N-alkylation of diamine ligand-type chelate resin with 5-chloromethyl-8-hydroxyquinoline HCl.
IT **7440-50-8DP**, complexes with chloromethylated styrene-ethylenediamine-hydroxyquinoline reaction product
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and characterization of)
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IT **148-24-3DP**, reaction products with chloromethylated polystyrenes and ethylenediamine
RL: SPN (Synthetic preparation); PREP (Preparation)
(prepn. and metal **chelation** properties of)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)

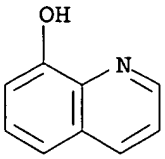


L35 ANSWER 110 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1982:485290 HCAPLUS
DOCUMENT NUMBER: 97:85290
TITLE: Evaluation of iron-chelating agents in an in vivo system: potential usefulness of EHPG, a powerful iron-chelating drug
AUTHOR(S): Hershko, Chaim; Grady, Robert W.; Link, Gabriela
CORPORATE SOURCE: Hadassah Med. Sch., Heb. Univ., Jerusalem, Israel
SOURCE: British Journal of Haematology (1982), 51(2), 251-60
CODEN: BJHEAL; ISSN: 0007-1048
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Fifteen compds. with a high affinity to Fe3+ have been screened for in vivo Fe-chelating efficiency in a rat model. One of the most potent of these drugs was ethylenediamine-N,N'-bis(o-hydroxyphenylglycine) (EHPG) [82647-27-6]. EHPG-induced Fe excretion was up to 8 times higher than Fe excretion induced by identical doses of desferroxamine (DF). Studies employing selective radio-Fe probes of reticuloendothelial and parenchymal Fe stores showed that although EHPG is able to interact with both storage Fe compartments, its effect on parenchymal Fe is much more pronounced. Unlike DF, which has 2 alternative routes of excretion, EHPG-induced Fe excretion is restricted mainly to the gut. Although EHPG seems to be superior to DF in both its chelating efficiency and preferential interaction with hepatic parenchymal Fe stores, information on its in vivo toxicity is at present insufficient and it cannot yet be recommended for clin. use.
IT **7439-89-6**, biological studies
RL: BIOL (Biological study)
(chelating agents for, evaluation of)
RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

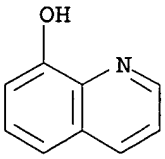
Fe

IT **148-24-3**, biological studies
RL: RCT (Reactant); RACT (Reactant or reagent)

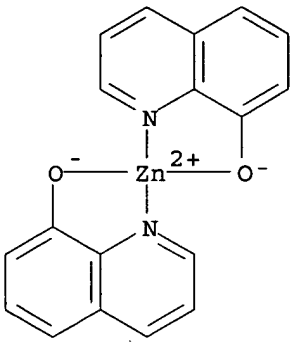
(iron **chelation** by)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L35 ANSWER 154 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1968:35418 HCAPLUS
DOCUMENT NUMBER: 68:35418
TITLE: Application of the zone melting technique to metal chelate systems. IV. Concentration of metal-8-hydroxyquinoline chelates in 8-hydroxyquinoline
AUTHOR(S): Kaneko, Hisamitsu; Kanagawa, Hiroshi; Kobayashi, Hiroshi; Ueno, Keihei
CORPORATE SOURCE: Kyushu Univ., Fukuoka, Japan
SOURCE: Talanta (1967), 14(12), 1411-15
CODEN: TLNTA2; ISSN: 0039-9140
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The zone melting technique has been applied to 8-hydroxyquinoline contg. trace amts. of various metal 8-hydroxyquinolinates, such as the Ni(II), Co(II), Zn(II), and Cu(II) chelates. The metal chelate in each system was concd. in the direction of zone travel. The highest concg. effect was observed in the Cu(II) chelate system. The concn. ratio, defined as the fraction of the metal chelate concd. in the bottom 15% of the column, was detd. after the 30th passage. A trace amt. of Cu ion extd. with a large excess of 8-hydroxyquinoline was concd. by means of the zone melting technique. The concn ratio was 96%.
IT **148-24-3**, uses and miscellaneous
RL: REM (Removal or disposal); PROC (Process)
(removal of, from its metal **chelates** by zone melting)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



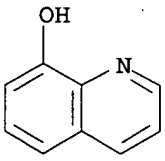
IT **13978-85-3**
RL: PROC (Process)
(sepn. of, from 8-quinolinol by zone melting)
RN 13978-85-3 HCAPLUS
CN Zinc, bis(8-quinolinolato-.kappa.N1,.kappa.O8)-, (T-4)- (9CI) (CA INDEX NAME)



L35 ANSWER 155 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1967:413881 HCAPLUS
DOCUMENT NUMBER: 67:13881
TITLE: Chelation as a weathering mechanism. I. Effect of complexing agents on the solubilization of iron from minerals and granodiorite
AUTHOR(S): Schalscha B., Eduardo; Appelt, H.; Schatz, Albert
CORPORATE SOURCE: Univ. Chile, Santiago, Chile
SOURCE: Geochimica et Cosmochimica Acta (1967), 31(4), 587-96
CODEN: GCACAK; ISSN: 0016-7037
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The role of chelation as a weathering mechanism (Bull. Geol. Soc. Am. 68: 1792(1957)) is further studied. Salicylate and several naturally-occurring chelating agents, in the form of free acids or their alkali salts, extd. Fe from goethite, hematite, magnetite, epidote, augite, biotite, and granodiorite. The removal of Fe from granodiorite by salicylate was demonstrable within a matter of min. and continued for 191 hrs. K and Al were brought into soln. when salicylate reacted with epidote, microcline, and granodiorite. Salicylate and 8-hydroxyquinoline extd. Fe from epidote in nonaq. media. There was no direct correlation between pH and the dissolving action of various reagents. For this and other reasons, the results are interpreted as addnl. evidence implicating chelation as a weathering process.

IT **148-24-3**, reactions
RL: USES (Uses)
(in rock weathering by **chelation**)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **7439-89-6P**, properties
RL: RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)
(leaching of, from minerals and rocks, 8-hydroxyquinoline and salicylate in)

RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

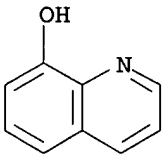
L35 ANSWER 156 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1967:86767 HCAPLUS
DOCUMENT NUMBER: 66:86767
TITLE: Coating copper with polyamides
PATENT ASSIGNEE(S): Metallgesellschaft A.-G.
SOURCE: Neth. Appl., 9 pp.
CODEN: NAXXAN
DOCUMENT TYPE: Patent
LANGUAGE: Dutch
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
NL 6605493		19661121		
FR 1478274			FR	
PRIORITY APPLN. INFO.:			DE	19650518

AB An intermediate layer of a styrene-butadiene copolymer contg. chelating agents is first applied to the Cu or Cu alloy and incompletely cured before the polylayer is applied. Thus, electrolytic Cu was pickled with dil. acid, polished, sprayed with 50 parts 20:80 styrene-butadiene copolymer and 50 parts solvent and stoved at 250.degree. after 15 min. A coating contg. 5% 8-hydroxyquinoline as chelating agent gave excellent bonding to the Cu. The coated Cu was heated to 400.degree. for 2 min. and dipped into polyundecanamide powder for 3-4 sec. Similarly, 1,2,3-benzotriazole, o-aminobenzoic acid, .alpha.-benzoin oxime, and quinaldic acid were used as chelating agents.

IT **148-24-3**, uses and miscellaneous
RL: USES (Uses)
(as **chelating** agent in 1,3-butadiene-styrene polymer coatings on copper)

RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **7440-50-8**, uses and miscellaneous
RL: USES (Uses)
(coatings on, from polyamides, chelating agent effect on)

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

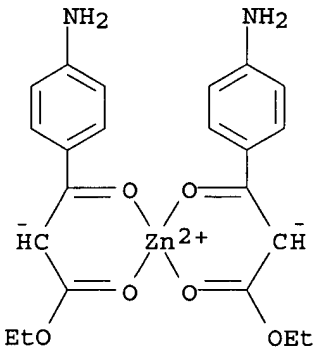
Cu

Cu

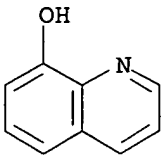
L35 ANSWER 157 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1964:452970 HCAPLUS
DOCUMENT NUMBER: 61:52970
ORIGINAL REFERENCE NO.: 61:9160d-e
TITLE: Metal chelates of ethyl 4-aminobenzoylacetate
AUTHOR(S): Donaruma, L. Guy
CORPORATE SOURCE: Clarkson Coll. of Technol., Potsdam, NY
SOURCE: Journal of Chemical and Engineering Data (1964), 9(3), 379-80
CODEN: JCEAAX; ISSN: 0021-9568
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB A general procedure is described for prepn. of the title chelates and chelates of other compds. by a ligand exchange process. Thus, a metal acetate and sufficient diketone to replace the OAc- were mixed in PhMe, and the HOAc was removed as the PhMe-HOAc binary azeotrope. The procedure was demonstrated for salts of Th4+, Cu2+, Al3+, Pb2+, Zn2+, Co2+, and Fe3+, and for compds. such as Ac2CH2, oxine, Bz2CH2, tropolone, 4-O2NC6H4COCH2CO2Et, and 4-H2NC6H4COCH2CO2Et. Where the acetate could not be used, the metal was pptd. with NH3, the ppt. washed and dissolved in HOAc, and the HOAc soln. was used in place of the metal acetate.

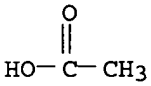
IT **101147-58-4**, Zinc, bis[hydrogen (p-aminobenzoyl)acetato]-, diethyl ester
(prepn. of)
RN 101147-58-4 HCAPLUS
CN Zinc, bis[hydrogen (p-aminobenzoyl)acetato]-, diethyl ester (7CI) (CA INDEX NAME)



IT **148-24-3**, 8-Quinolinol
(reaction with metal acetates in boiling toluene, **chelate** formation in)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **557-34-6**, Zinc acetate
(reaction with .beta.-diketones in boiling toluene, chelate formation in)
RN 557-34-6 HCAPLUS
CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

L35 ANSWER 158 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1961:69524 HCAPLUS
DOCUMENT NUMBER: 55:69524
ORIGINAL REFERENCE NO.: 55:13164c-d
TITLE: Indicators for metal titration with EDTA. II. 8-Quinolinol
AUTHOR(S): Costa, Antonio Celso Spinola
CORPORATE SOURCE: Univ. Bahia, Brazil
SOURCE: Anais assoc. brasil. quim. (1960), 19, 21-8
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. CA 52, 16117h; 54, 22137e. When org. solvents (MeOH, EtOH, PrOH, or dioxane) are added to the titration mixt. (in 60-70% initial and over 35% final concn.), several metals can be titrated with EDTA with 8-quinolinol (I) as indicator. Zn is titrated at pH 5.5-9.5 (best 8.5-9.5) with I + methylene blue (or methyl violet); Cu at pH 5-6.5; Pb at pH 9-10 with citrate or tartrate added; Mn at pH 8-10 with ascorbic acid added; Cd at pH 8.5-10; Ni at pH 5.5-6.5; and Fe at pH 2-4, with more than the usual amt. of I.
IT **7439-89-6**, Iron **7439-96-5**, Manganese **7440-50-8**, Copper **7440-66-6**, Zinc
(analysis, detn.)
RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7439-96-5 HCAPLUS
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

Mn

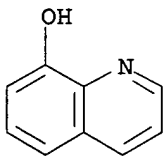
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

IT **148-24-3**, 8-Quinolinol
(as indicator, for **chelatometry**)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L35 ANSWER 159 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1960:123833 HCAPLUS
DOCUMENT NUMBER: 54:123833
ORIGINAL REFERENCE NO.: 54:23602e-g
TITLE: Chelate ion-exchange resins
AUTHOR(S): Nakamura, Keiji; Yanagita, Masaya
CORPORATE SOURCE: Inst. Phys. Chem. Research, Tokyo
SOURCE: Scientific Papers of the Institute of Physical and Chemical Research (Japan) (1960), 54, 146-9
CODEN: SPIPAG; ISSN: 0020-3092
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB Polystyrenes contg. acetylacetone or 8-quinolinol chelating groups were prepd. and tested as cation exchangers. Poly(vinylbenzenesulfonamide) (4.5 g.) (prepd. from a styrene-5%-divinylbenzene copolymer by reaction with ClSO3H and NH3) was suspended in a soln. of 1 g. NaOH in 4.5 ml. tetrahydrofuran and 7.5 ml. H2O; to the suspension below 10.degree. was added 2.5 g. diketene over 1 hr., with stirring continued 1 hr. After standing overnight poly(N-acetoacetylvinylbenzenesulfonamide) was sepd. by filtration. Its Na capacity was 1.63 meq./g. Reaction of 5-aminomethyl-8-quinolinol in pyridine with a chlorosulfonated styrene-5%-divinylbenzene copolymer gave a resin contg. 8-quinolinol chelating groups. Graphs for the absorption of Fe+++, Cu++, Co++, Ni++ and UO2++ by both resins as functions of pH were given.
IT **7440-50-8**, Copper
(base exchange of, on styrene polymer resins contg. acetyl-acetone or 8-quinolinol chelating groups)

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

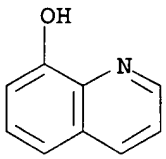
IT **7440-48-4**, Cobalt
(base exchange of, on styrene polymer resins contg. acetylacetone or 8-quinolinol chelating groups)
RN 7440-48-4 HCAPLUS
CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

IT **7439-89-6**, Iron
(ion exchange of, on styrene polymer resins contg. acetylacetone or 8-quinolinol chelating groups)
RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

IT **148-24-3**, 8-Quinolinol
(styrene polymers contg. **chelating** groups of, prepn. and base-exchanging properties of)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



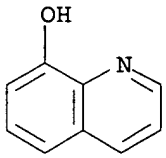
L35 ANSWER 160 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1959:108629 HCAPLUS
DOCUMENT NUMBER: 53:108629
ORIGINAL REFERENCE NO.: 53:19447d-f
TITLE: Syntheses of metal complexing polymers. IV. Polymers containing miscellaneous functional groups
AUTHOR(S): Davies, R. V.; Kennedy, J.; Lane, E. S.; Willans, J. L.
SOURCE: Journal of Applied Chemistry (1959), 9, 368-71
CODEN: JACHAU; ISSN: 0021-8871
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB cf. C.A. 53, 3032h. Resins were prepd. contg. 8-quinolinol, .omicron.-hydroxybenzenearsonic acid, salicylic acid, and kojic acid as functional units. Two general methods were used: (1) coupling of diazotized poly(aminostyrene) with the resp. phenol or enolic compd. and

(2) condensation reactions with HCHO. Of these resins the resorcinol-salicylic acid-HCHO copolymer showed the greatest complexing capacity for Cu++ and Na+.

IT **7440-50-8**, Copper
(chelating agents for, from enolic or phenolic resins)
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

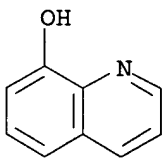
IT **148-24-3**, 8-Quinolinol
(**chelating** resins from, by coupling with diazotized poly(aminostyrene) or condensation with HCHO)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L35 ANSWER 161 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1957:73773 HCAPLUS
DOCUMENT NUMBER: 51:73773
ORIGINAL REFERENCE NO.: 51:13299e
TITLE: Effect of the interaction between chelating agents on their fungitoxicity
AUTHOR(S): Byrde, R. J. W.; Woodcock, D.
CORPORATE SOURCE: Univ. Bristol, UK
SOURCE: Nature (1957), 179, 539
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB A significant increase in the fungistatic activity was observed when ethylenediaminetetraacetic acid (EDTA) and Cu were added to 5-phenyl oxine or 5-amyl oxine when tested against Aspergillus niger. EDTA alone produced similar results.

IT **148-24-3**, 8-Quinolinol
(and derivs., fungitoxicity of, **chelating** agents and)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **7440-50-8**, Copper
(compounds, chelates, as fungicides)

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

L35 ANSWER 162 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1957:61555 HCAPLUS
DOCUMENT NUMBER: 51:61555
ORIGINAL REFERENCE NO.: 51:11162b-c
TITLE: Complexometric titrations with azoxine indicators
AUTHOR(S): Fritz, James S.; Lane, Wm. J.; Bystroff, Ann Sutton
CORPORATE SOURCE: Iowa State Coll., Ames
SOURCE: Anal. Chem. (1957), 29, 821-5
CODEN: ANCHAM; ISSN: 0003-2700
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB 7-(1-Naphthylazo)-8-quinolinol-5-sulfonic acid and several related compds. are valuable as metal ion indicators in complexometric titrations. Cd, Co, Cu, Pb, Ni, rare earths, Th, Y, and Zn can be accurately titrated in H + soln. with 0.05M (ethylenedinitrilo)tetraacetate. In many cases a small amt. of Cu must be present in order for the indicator to function properly. Ca and Mg do not interfere if the pH is 5.5 or less. With citrate as a masking agent, Zn and other bivalent metals can be titrated in the presence of U(VI), Th, or Zr. The use of tartrate, fluoride, iodide, or thiourea as masking agents in certain cases also increases the selectivity of the method.
IT **7440-50-8**, Copper
(analysis, detn.)
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

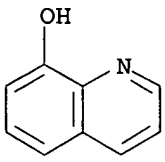
IT **7440-48-4**, Cobalt **7440-66-6**, Zinc
(analysis, detn., 8-quinolinol azo derivs. as indicators for)
RN 7440-48-4 HCAPLUS
CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

IT **148-24-3**, 8-Quinolinol
(azo derivs., as indicators for **chelatometry**)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



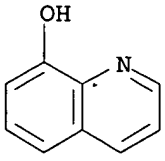
L35 ANSWER 163 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1956:61655 HCAPLUS
DOCUMENT NUMBER: 50:61655
ORIGINAL REFERENCE NO.: 50:11561a-c
TITLE: Selective ion exchangers from polystyrene
AUTHOR(S): Parrish, J. R.
CORPORATE SOURCE: Rhodes Univ., Grahamstown, S. Afr.
SOURCE: Chemistry & Industry (London, United Kingdom) (1956) 137
CODEN: CHINAG; ISSN: 0009-3068
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB Three selective ion exchangers were prepd. from styrene + 2% divinylbenzene copolymers. A polythiol was prepd. by chloromethylation followed by the formation and hydrolysis of the thiourea salt. The resin selectivity absorbed Hg; regeneration was done with ammonical aq. 1,2-dimercaptopropanol. There was no absorption of Mg in H+ soln. Arsonic acid groups were introduced by the Bart reaction on 4-polyaminostyrene. The amino resin was pptd. by nitration and reduction with Sn and HCl. The resin showed little selectivity at pH values above 3. There was no absorption of Zn, Mg, or Ca at pH 2. Diazotized polyaminostyrene was coupled with 8-hydroxyquinoline. About 60% of the quinoline was consumed. The resulting resin absorbed Cu, Ni, and Co at pH 2-3. Zn, Mn, Al, Mg, and Co were not absorbed below pH values of 1.5, 2.0, 2.8, 4.0, and 4.8, resp. The rates of equilibration with this resin were slow.

IT **7440-50-8**, Copper
(-exchanging styrene polymer derivs.)
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IT **148-24-3**, 8-Quinolinol
(azo derivs., from diazotized polyaminostyrene, as **chelating** resins)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



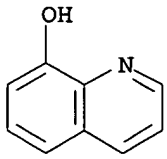
IT **7440-48-4**, Cobalt
(exchange reactions between Co++ and Co complexes, with styrene polymer derivs.)
RN 7440-48-4 HCAPLUS
CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

L35 ANSWER 164 OF 164 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1955:58695 HCAPLUS
DOCUMENT NUMBER: 49:58695
ORIGINAL REFERENCE NO.: 49:11315g-i
TITLE: New chelating resins
AUTHOR(S): Parrish, J. R.
CORPORATE SOURCE: Rhodes Univ., Grahamstown, S. Afr.
SOURCE: Chemistry & Industry (London, United Kingdom) (1955) 386-7
CODEN: CHINAG; ISSN: 0009-3068
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB A resin, made by the condensation of HCHO, resorcinol, and pyrogallocarboxylic acid, forms a colored complex with Ba, Ca, and Sr ions in alk. medium. At pH 10, Ca can be removed quantitatively from colored solns. (molasses), and can be recovered by washing the resin with dil. HCl. A resin prepd. by diazotizing a resin of the .omicron.-aminophenol type, and coupling with 2-naphthol, chelates Cu at pH 3.0. Mg and Cu in a buffered pH 3.0 soln. could be sepd. quantitatively on a 10-cm. column. The Cu could be eluted from the resin with HCl. A resin prepd. by condensing .omicron.-nitrophenol with resorcinol and HCHO, and then reducing the nitro group could be used quantitatively to sep. Cu from Ca at pH 5.5. At pH values below 4.5, the Cu was not retained quantitatively. A resin made from oxine, resorcinol, and HCHO showed chelating properties similar to those of oxine, but its capacity was very low.
IT **7440-50-8**, Copper
(analysis, sepn. from Ca and Mg with chelating resin)
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

(compds., with chelating resins
IT **148-24-3**, 8-Quinolinol
(reaction products of, with HCHO and resorcinol, **chelating** resin from)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)


OH
N

Claim 5+6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=> d que
L1             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  8-HYDROXYQUINOLINE/CN
L41            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ZINC CHLORIDE/CN
L43          233 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1(L)(BAC OR DMA OR PAC OR
                 PKT OR THU)/RL
L44            4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L43 AND L41

=> d ibib abs hitstr 1-4

L44  ANSWER 1 OF 4  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2003:23106  HCAPLUS
DOCUMENT NUMBER:          138:83329
TITLE:                    Use of metal ion chelates in validating biological
                          molecules as drug targets in test animal models
INVENTOR(S):              Rist, Oystein; Hogberg, Thomas; Holst Lange, Birgitte;
                          Schwartz, Thue W.; Elling, Christian E.
PATENT ASSIGNEE(S):       7TM Pharma A/S, Den.
SOURCE:                   PCT Int. Appl., 247 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   2
PATENT INFORMATION:

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     WO 2003003009      A1   20030109      WO 2002-DK456    20020628
         W:  AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
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             FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG,
             KP, KR, KZ, LC, LK, LR, LS, LT, LV, LV, MA, MD, MG, MK, MN, MW,
             MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK,
             SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW,
             AM, AZ, BY, KG
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
             CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR,
             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
     WO 2002054077      A2   20020711      WO 2001-DK867    20011221
         W:  AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
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             SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM,
             AZ, BY, KG, KZ
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH,
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             BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.:                DK 2001-1026     A  20010629
                                      DK 2001-1027     A  20010629
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                                      DK 2001-1030     A  20010629
                                      DK 2001-1031     A  20010629
                                      US 2001-301931P  P  20010629
                                      WO 2001-DK867    A  20011221
                                      WO 2000-EP13389  W  20001229
                                      DK 2001-536      A  20010330
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US 2001-280237P P 20010330

OTHER SOURCE(S): MARPAT 138:83329

AB The invention discloses the use of chem. compds. or selections of chem. compds. (libraries) of the general Formula R1XFY(R1)GZR1 [F, G = N, O, S, Se, P; X, Y, Z = (un)branched C1-12 alkyl, aryl, heteroaryl, etc.; R1 = ABC; A = coupling or connecting moiety; B = spacer moiety; C = functional group] for in vivo methods for testing or validating the physiol. importance and/or the therapeutic or pharmacol. potential of biol. target mols., notably proteins such as, e.g., receptors and esp. 7TM receptors in test animals expressing the biol. target mol. with, notably, a silent, engineered metal ion site. Use of specific metal ion binding sites of a generic nature in specific biol. target mols. such as, e.g. transmembrane proteins wherein the metal ion binding site is capable of forming a complex with a metal ion is also described. Also disclosed are chem. compds. or libraries suitable for use in methods for improving the in vivo pharmacokinetic behavior of metal ion chelates (e.g. the absorption pattern, the plasma half-life, the distribution, the metab. and/or the elimination of the metal ion chelates). In order to improve the efficacy of the impact of the metal ion chelate on the biol. target mol. after administration of the metal ion chelate in vivo to a test animal, it is advantageous e.g. to increase the period during which the metal ion chelate is in the circulatory system and/or localized at the target. Further disclosed are metal ion-chelating compds. designed to be suitable for use in a target validation process according to the invention, as well as libraries of at least two or more of such metal ion-chelating compds.

IT **7646-85-7**, Zinc chloride, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(metal ion chelates in validating biol. mols. as drug targets in test animal models)

RN 7646-85-7 HCAPLUS

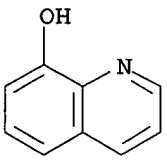
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

IT **148-24-3**, 8-Quinolinol, biological studies
RL: BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(metal ion chelates in validating biol. mols. as drug targets in test animal models)

RN 148-24-3 HCAPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 2 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2002:845558 HCAPLUS

DOCUMENT NUMBER: 137:346235

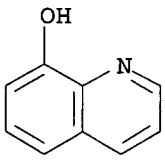
TITLE: Chelated 8-hydroxyquinoline for the treatment of epithelial lesions
INVENTOR(S): Jordan, Russel T.; Hanson, Carl C.; Potestio, Frank S.
PATENT ASSIGNEE(S): Dermex Pharmaceuticals, LLC, USA
SOURCE: U.S., 10 pp., Cont.-in-part of U.S. Ser. No. 21,421, abandoned.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6476014	B1	20021105	US 2001-601304	20010102
WO 9939721	A1	19990812	WO 1999-US2817	19990210
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 2003113381	A1	20030619	US 2002-247161	20020918
US 2003114484	A1	20030619	US 2002-247526	20020918

PRIORITY APPLN. INFO.: US 1998-21421 B2 19980210
WO 1999-US2817 W 19990210
US 2001-601304 A3 20010102

AB Oxinates including 8-hydroxyquinoline and a heavy metal are topically applied to epidermal lesions for therapeutic effect, wherein the epithelial lesions are selected from cancerous and precancerous lesions, cysts, and warts; and permitting the compn. to destroy the lesion.

IT **148-24-3D**, 8-Hydroxyquinoline, metal chelates
RL: **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(chelated hydroxyquinoline for treatment of epithelial lesions)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **7646-85-7**, Zinc chloride, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(chelated hydroxyquinoline for treatment of epithelial lesions)
RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

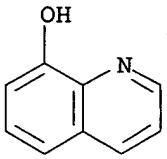
L44 ANSWER 3 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:511033 HCAPLUS
DOCUMENT NUMBER: 131:139492
TITLE: Chelated 8-hydroxyquinoline for the treatment of epithelial lesions
INVENTOR(S): Jordan, Russel T.; Hanson, Carl C.; Potestio, Frank S.
PATENT ASSIGNEE(S): Dermex Pharmaceuticals, LLC, USA
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9939721	A1	19990812	WO 1999-US2817	19990210
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2320628	AA	19990812	CA 1999-2320628	19990210
AU 9925956	A1	19990823	AU 1999-25956	19990210
AU 755521	B2	20021212		
EP 1052999	A1	20001122	EP 1999-905911	19990210
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
NZ 506367	A	20030328	NZ 1999-506367	19990210
US 6476014	B1	20021105	US 2001-601304	20010102
US 2003113381	A1	20030619	US 2002-247161	20020918
US 2003114484	A1	20030619	US 2002-247526	20020918

PRIORITY APPLN. INFO.:
US 1998-21421 A2 19980210
WO 1999-US2817 W 19990210
US 2001-601304 A3 20010102

AB Oxinates including 8-hydroxyquinoline and a heavy metal are topically applied to epidermal lesions for therapeutic effect. The therapeutic compn. demonstrates selective toxicity with a therapeutic index of 100% on human lung cancer, breast cancer, melanoma, venereal warts, male veruoca warts, lesions produced by human papilloma virus, basal cell carcinoma, solar keratosis, and Kaposi's sarcoma. In veterinary applications where dogs, cats, and horses are the patients, the compn. shows a 100% therapeutic index with selective toxicity against eye cancer, sarcoids, sarcoma, malignant melanoma, rectal adenoma, histiocytoma, and sebaceous adenoma.

IT **148-24-3D**, 8-Hydroxyquinoline, chelates
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(chelated hydroxyquinoline for treatment of epithelial lesions)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)

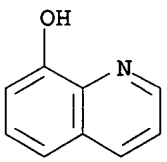


IT **7646-85-7**, Zinc chloride, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction; chelated hydroxyquinoline for treatment of epithelial lesions)
RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L44 ANSWER 4 OF 4 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:455828 HCAPLUS
DOCUMENT NUMBER: 119:55828
TITLE: Status of certain additional over-the-counter drug category II and III active ingredients
CORPORATE SOURCE: United States Food and Drug Administration, Rockville, MD, 20857, USA
SOURCE: Federal Register (1993), 58(88), 27636-44, 10 May 1993
CODEN: FEREAC; ISSN: 0097-6326
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Certain over-the-counter drugs are not generally recognized as safe and effective or are misbranded under the Federal Food, Drug, and Cosmetic Act. The list includes digestive, external analgesic, insect bite and sting, poison ivy, skin protectant, diaper rash, topical antifungal, and oral analgesic products.
IT **148-24-3**, Oxyquinoline, biological studies **7646-85-7**, Zinc chloride, biological studies
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(over-the-counter prepns. contg., stds. for)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

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L1             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  8-HYDROXYQUINOLINE/CN
L2               STR
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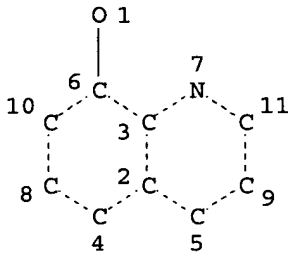


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NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  11

STEREO ATTRIBUTES: NONE
L5           671 SEA FILE=REGISTRY FAM FUL L2
L8          1054 SEA FILE=HCAPLUS ABB=ON  PLU=ON  JORDAN R?/AU
L11          513 SEA FILE=HCAPLUS ABB=ON  PLU=ON  HANSON C?/AU
L12            2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L8 AND L11
L13            5 SEA FILE=HCAPLUS ABB=ON  PLU=ON  POTESTIO F?/AU
L14            2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L12 AND L13
L18       165673 SEA FILE=REGISTRY ABB=ON  PLU=ON  ZN/ELS
L19         1103 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L5 AND L18
L20            2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L14 AND L19
L23            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  IRON/CN
L26            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  COBALT/CN
L27       263268 SEA FILE=REGISTRY ABB=ON  PLU=ON  MO/ELS
L29            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  MANGANESE/CN
L31            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  COPPER/CN
L32         2026 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1 AND (L23 OR L18 OR L26 OR
                 L27 OR L29 OR L31)
L34          332 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1(L)CHELAT?
L35          164 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L32 AND L34
L36            2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L20 AND L35
L37          599 SEA FILE=HCAPLUS ABB=ON  PLU=ON  "SKIN, DISEASE (L) LESION"+OLD
                 /CT
L38            2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L5 AND L37
L39            2 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L36 AND L38
L41            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  ZINC CHLORIDE/CN
L43          233 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1(L)(BAC OR DMA OR PAC OR
                 PKT OR THU)/RL
L44            4 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L43 AND L41
L45           31 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1(L)(TOPICAL OR SKIN OR
                 LESION OR EPITHEL? OR EPIDER?)
L46           11 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L45 AND L43
L47            9 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L46 NOT L44
L48            9 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L47 NOT L39

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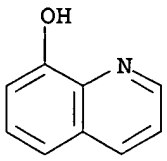
L48 ANSWER 1 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:855800 HCAPLUS
DOCUMENT NUMBER: 139:354144
TITLE: Materials with zinc ionophoric behavior for treating skin or hair microbial infections and dandruff
INVENTOR(S): Schwartz, James Robert; Poison, George; Turley, Patricia A.; Nelson, John D.; Gavin, David F.; Roberts, Katherine P.; Margraf, Carl Hinz, III; Kaufman, David Joseph; Marsh, Randall Glenn
PATENT ASSIGNEE(S): The Procter & Gamble Company, USA; Arch Chemical
SOURCE: PCT Int. Appl., 62 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003088965	A1	20031030	WO 2003-US8476	20030318
W: AE, AG, AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, CZ, DE, DE, DK, DK, DM, DZ, EC, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2004058855	A1	20040325	US 2003-392104	20030318

PRIORITY APPLN. INFO.: US 2002-374347P P 20020422

AB A method for delivering excess zinc to eukaryotic cells to inhibit the metab. of the cell comprises treating the cells with a zinc ionophoric that is capable of delivering a zinc ion across a cellular membrane wherein the min. inhibitory concn. (MIC) of the zinc ionophoric material is <500 ppm. The invention also relates to methods of treating microbial infections on the skin or scalp, and for the treatment of dandruff. The zinc ionophoric material can be in combination with a zinc-contg. material and there can ve an increase in an intracellular zinc level by 1.5-fold more than would occur in the absence of the zinc ionophoric material. Thus, an oil-in-water compn. contained mineral oil 20.0, and Polysorbate 3.0% in the oily phase, ZnO 0.2, zinc pyrithione 1.0, preservative 0.3, perfume 0.2 and water qs top 100%.

IT **148-24-3**, 8-Hydroxyquinoline, biological studies
RL: COS (Cosmetic use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(materials with zinc ionophoric behavior for treating **skin** or hair microbial infections and dandruff)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 2 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:521446 HCAPLUS
DOCUMENT NUMBER: 137:83429
TITLE: Skin care product containing a retinoid and a retinoid booster system in a dual compartment package
INVENTOR(S): Granger, Stewart Paton; Pillai, Sreekumar; Scott, Ian Richard
PATENT ASSIGNEE(S): Unilever P.L.C., UK; Unilever N.V.; Hindustan Lever Limited
SOURCE: PCT Int. Appl., 50 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

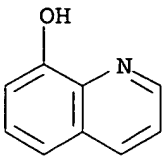
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002053125	A2	20020711	WO 2001-EP14769	20011213
WO 2002053125	A3	20021003		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRIORITY APPLN. INFO.: US 2000-258460P P 20001228

AB A stable skin care product contains a first compn. comprising about 0.001-10% a retinoid, a second compn. comprising 0.0001-50% at least 1 retinoid booster, a first compartment for storing the first compn., and a second compartment for storing the second compn., the first and second compartments being joined together. Thus, a combination of oleoyl hydroxyethylimidazoline and climbazole along with retinol inhibited the expression of transglutaminase.

IT **148-24-3**, 8-Hydroxyquinoline, biological studies
RL: COS (Cosmetic use); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(**skin** care product contg. retinoid and retinoid booster system in dual compartment package)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L48 ANSWER 3 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:521445 HCAPLUS
DOCUMENT NUMBER: 137:83428
TITLE: Stable skin care compositions containing a retinoid and a retinoid booster system
INVENTOR(S): Granger, Stewart Paton; Chandar, Prem; Scott, Ian Richard
PATENT ASSIGNEE(S): Unilever P.L.C., UK; Unilever N.V.; Hindustan Lever Limited
SOURCE: PCT Int. Appl., 49 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

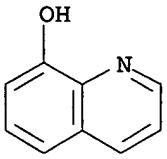
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002053124	A2	20020711	WO 2001-EP14491	20011206
WO 2002053124	A3	20030522		
WO 2002053124	B1	20040304		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2003049286	A1	20030313	US 2001-8067	20011105
EP 1349536	A2	20031008	EP 2001-272638	20011206
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.: US 2000-258459P P 20001228
WO 2001-EP14491 W 20011206

AB A stable skin care compn. contains 0.0001-50% at least 1 retinoid booster, 0.001-10% a retinoid, and a cosmetically acceptable vehicle, wherein the stable skin care compn. is contained in a package so that the compn. is out of contact with oxygen. A synergistic inhibition of transglutaminase expression by a combination of oleoyl hydroxyethylimidazoline and climbazole with retinol was obsd.

IT **148-24-3**, 8-Hydroxyquinoline, biological studies
RL: COS (Cosmetic use); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(stable **skin** care compns. contg. retinoid and retinoid booster system)

RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L48 ANSWER 4 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2002:521422 HCAPLUS
DOCUMENT NUMBER: 137:83423
TITLE: Skin care product containing retinoids, retinoid booster and phytoestrogens in a dual compartment package
INVENTOR(S): Pillai, Sreekumar; Granger, Stewart Paton; Scott, Ian Richard; Pocalyko, David Joseph
PATENT ASSIGNEE(S): Unilever P.L.C., UK; Unilever N.V.; Hindustan Lever Limited
SOURCE: PCT Int. Appl., 56 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002053108	A2	20020711	WO 2001-EP14486	20011206
WO 2002053108	A3	20020926		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002143059	A1	20021003	US 2001-3850	20011102
EP 1349538	A2	20031008	EP 2001-990538	20011206
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				

PRIORITY APPLN. INFO.: US 2000-258457P P 20001228
WO 2001-EP14486 W 20011206

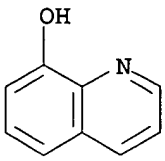
AB A stable skin care product contains a first compn. comprising 0.001-10% a retinoid, a second compn. comprising 0.0001-50% at least 1 retinoid booster and 0.001-10% a phytoestrogen. The products also contain a compartment for storing the first compn. and a second compartment for storing the second compn., the first and second compartments being joined together. Synergy between genistein and daidzein and retinoids was tested. In both the studies genistein was delivered to the cells in a sol. form in DMSO/EtOH. Genistein (1 .mu.m) alone stimulated CRABP-2 significantly. Both genistein and daidzein stimulate retinoid activity in a synergistic manner. All the retinoids tested, except retinyl acetate showed synergy with genistein and daidzein. These data support our claim that the phytoestrogenic flavonoids genistein and daidzein, when supplied to cells in a sol. form, synergistically enhanced the activity of

retinoids.

IT **148-24-3**, 8-Hydroxyquinoline, biological studies
RL: COS (Cosmetic use); **PAC (Pharmacological activity)**; **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(**skin** care product contg. retinoid boosters and phytoestrogens in dual compartment package)

RN 148-24-3 HCAPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L48 ANSWER 5 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1999:594841 HCAPLUS

DOCUMENT NUMBER: 131:219020

TITLE: Tissue paper having antimicrobial skin lotion

INVENTOR(S): Klofta, Thomas James; Steinhardt, Mark John

PATENT ASSIGNEE(S): The Procter & Gamble Company, USA

SOURCE: PCT Int. Appl., 60 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 9

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9945771	A1	19990916	WO 1999-US4221	19990226
W: AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6238682	B1	20010529	US 1998-41231	19980312
CA 2322506	AA	19990916	CA 1999-2322506	19990226
AU 9927929	A1	19990927	AU 1999-27929	19990226
AU 747849	B2	20020523		
BR 9908715	A	20001121	BR 1999-8715	19990226
EP 1061799	A1	20001227	EP 1999-908519	19990226
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
JP 2002505894	T2	20020226	JP 2000-535199	19990226
ZA 9901999	A	19990913	ZA 1999-1999	19990311

PRIORITY APPLN. INFO.:

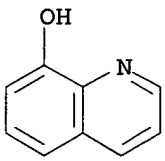
US 1998-41231	A	19980312
US 1993-165767	B1	19931213
US 1995-398727	A1	19950306
US 1996-658342	A1	19960605
WO 1999-US4221	W	19990226

AB An anhyd. lotion compn. for killing viruses and bacteria in addn. to

imparting a soft, lubricious, lotion-like feel when applied to tissue paper and tissue paper treated with such lotion compns. are disclosed. The antiviral action of the lotion is due to the addn. of an org. acid such as citric acid or salicylic acid. The antibacterial action is due to the addn. of antibacterial agents such as triclosan. The solubilization of the antiviral and antibacterial agents within the lotion matrix is aided by the addn. of hydrophilic solvents and hydrophilic surfactants. The lubricious lotions also contain a plastic or fluid skin conditioning agent such as petrolatum, an optional immobilizing agent such as a fatty alc. or fatty acid to immobilize the skin conditioning agent on the surface of the tissue paper web and a hydrophilic surfactant to improve wettability when applied to toilet tissue. Because less lotion is required to impart the desired soft, lotion-like feel benefits, detrimental effects on the tensile strength and caliper of the lotioned paper are minimized or avoided. The anhyd. nature of the lotions also aids in the maintenance of such phys. properties as tensile and caliper. A lotion contained petrolatum 41.0, cetyl alc. 28.6, cetareth-10 15.2, salicylic acid 10.1, and triclosan 5.1%.

IT **148-24-3**, 8-Hydroxyquinoline, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(tissue paper having antimicrobial **skin** lotion)

RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L48 ANSWER 6 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:709899 HCAPLUS
DOCUMENT NUMBER: 125:317326
TITLE: 8-Hydroxyquinoline for treatment of skin diseases caused by Trichophyton
INVENTOR(S): Myagawa, Sumyuki; Oonishi, Kyotaka; Soeda, Mahito; Oota, Michitaka
PATENT ASSIGNEE(S): Shinnittetsu Kagaku, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 08245390	A2	19960924	JP 1995-53036	19950313

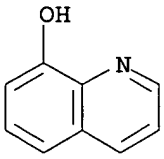
PRIORITY APPLN. INFO.: JP 1995-53036 19950313

AB The treatment agents contain 8-hydroxyquinoline (I) and/or its metal complexes as active ingredients. I-Cu (at 2.5 .mu.g/mL) totally

controlled Trichophyton mentagrophytes and T. rubrum, vs. much less effect, for cresol soap.

IT **148-24-3**, 8-Hydroxyquinoline, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(hydroxyquinoline for treatment of **skin** diseases caused by Trichophyton)

RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L48 ANSWER 7 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:467374 HCAPLUS
DOCUMENT NUMBER: 125:123748
TITLE: Topical preparations to assist skin tear injuries
INVENTOR(S): Mulder, Gerit D.
PATENT ASSIGNEE(S): USA
SOURCE: U.S., 5 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

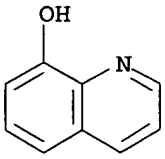
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5536502	A	19960716	US 1995-383507	19950203

PRIORITY APPLN. INFO.: US 1995-383507 19950203

AB A low-sensitizing medicament for use in treating skin-tear injuries includes an emulsified water and hydrocarbon carrier portion, an emollient portion, a hydroxyquinoline antimicrobial portion, a mild keratolytic portion, and a paraben preservative portion. Addnl. ingredients include a zinc oxide topical protectant, vitamin E, a buffer or alkalizing agent that adjusts pH in a range from 6.5 to 6.8, and a scenting agent. For example, a gel balm ointment contained deionized water 27.72, petrolatum 34.90, beeswax 5.84, lanolin oil 15.5, methylparaben 0.25, propylparaben 0.1, 8-hydroxyquinoline 0.75, ZnO 2, Me salicylate 0.25, .alpha.-tocopherol 1, Na borate 0.94, sorbitan sesquioleate 0.25, lanolin wax 0.5, and urea 10 %.

IT **148-24-3**, 8-Hydroxyquinoline, biological studies
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antimicrobial; **topical** prepns. to promote superficial **skin** injuries)

RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L48 ANSWER 8 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:471904 HCAPLUS
DOCUMENT NUMBER: 122:222887
TITLE: Topical 8-hydroxyquinoline compositions
INVENTOR(S): Whitefield, Martin
PATENT ASSIGNEE(S): Diomed Developments Ltd., UK
SOURCE: Brit. UK Pat. Appl., 15 pp.
CODEN: BAXXDU
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

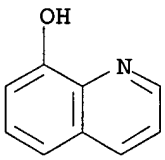
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
GB 2279567	A1	19950111	GB 1994-12606	19940623
GB 2279567	B2	19970402		

PRIORITY APPLN. INFO.: GB 1993-13863 19930705

AB Topical compns. for treatment of inflammatory proliferative skin diseases contain 8-hydroxyquinoline, an anhyd. oleophylic, water-immiscible solvent, an antioxidant, a thickener, and if desired betamethasone valerate. A compn. contg. 8-hydroxyquinoline 0.1, iso-Pr myristate 10.0, hydroxypropyl cellulose 3.0, and ethanol up to 100 parts by wt. was prepd. for psoriasis treatment. Betamethasone valerate may be incorporated in a concn. of 0.1% by wt.

IT **148-24-3**, 8-Hydroxyquinoline, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(**topical** hydroxyquinoline compns. for treatment of **skin** inflammation)

RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L48 ANSWER 9 OF 9 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:350939 HCAPLUS
DOCUMENT NUMBER: 122:114987
TITLE: Compositions containing 8-hydroxyquinoline for treatment of hyperproliferative skin diseases.
INVENTOR(S): Whitefield, Martin

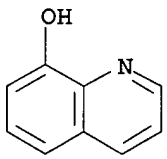
PATENT ASSIGNEE(S): Diomed Developments Ltd., UK
SOURCE: Eur. Pat. Appl., 7 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 634170	A1	19950118	EP 1994-304561	19940623
EP 634170	B1	19970326		
R: AT, BE, CH, DE, DK, ES, FR, GR, IE, IT, LI, LU, MC, NL, PT, SE				
AT 150644	E	19970415	AT 1994-304561	19940623
ES 2102777	T3	19970801	ES 1994-304561	19940623
IL 110166	A1	19980816	IL 1994-110166	19940629
CA 2127218	AA	19950106	CA 1994-2127218	19940630
AU 9466089	A1	19950112	AU 1994-66089	19940630
AU 674411	B2	19961219		
US 5817675	A	19981006	US 1997-863396	19970527
PRIORITY APPLN. INFO.:			GB 1993-13866	19930705
			US 1994-268440	19940630

AB 8-Hydroxyquinoline is useful in the topical treatment of inflammatory proliferative skin diseases, esp. psoriasis. It should be applied in an essentially water-immiscible vehicle such as iso-Pr myristate and the compns. may consist of a corticosteroid. Thus, a topical formulation was prepd. from 8-hydroxyquinoline 0.5, white soft paraffin 40.0, iso-Pr myristate 10.0, cetylstearyl alc. 7.0, Na lauryl sulfate 1.0, phenoxyethanol 0.1, and water to 100.0 parts.

IT **148-24-3**, 8-Hydroxyquinoline, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(**topical** compns. contg. hydroxyquinoline for treatment of hyperproliferative **skin** diseases)

RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



Claims 15, 17, 18, 20, 21, 35, 36

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L18       165673 SEA FILE=REGISTRY ABB=ON  PLU=ON  ZN/ELS
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L26            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  COBALT/CN
L27       263268 SEA FILE=REGISTRY ABB=ON  PLU=ON  MO/ELS
L29            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  MANGANESE/CN
L31            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  COPPER/CN
L32         2026 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1 AND (L23 OR L18 OR L26 OR
                 L27 OR L29 OR L31)
L49            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PROPYLENE GLYCOL/CN
L51           97 SEA FILE=REGISTRY ABB=ON  PLU=ON  LECITHIN?/CN
L52            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIMETHYL SULFOXIDE/CN
L53            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "NORDIHYDROGUAIARETIC
                 ACID"/CN
L55              STR
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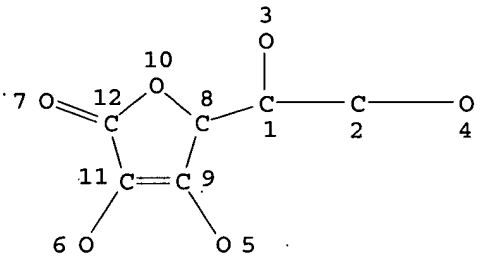


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NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  12

STEREO ATTRIBUTES: NONE
L56         1025 SEA FILE=REGISTRY FAM FUL L55
L59          102 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L32 AND (L23 OR L18 OR L26 OR
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L60           19 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L59 AND CHELAT?

=> d l60 ibib ab hitstr 1-19

L60  ANSWER 1 OF 19  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:        2003:536189  HCAPLUS
DOCUMENT NUMBER:         139:241609
TITLE:                   The protective effect of free radical scavengers and
                         metal chelators on polyethylene
                         glycol-treated rice leaves
AUTHOR(S):               Hsu, S. Y.; Kao, C. H.
CORPORATE SOURCE:        Department of Agronomy, National Taiwan University,
                         Taipei, Taiwan, 106, Peop. Rep. China
SOURCE:                  Biologia Plantarum (2003), 46(4), 617-619
                         CODEN: BPABAJ; ISSN: 0006-3134
PUBLISHER:               Institute of Experimental Botany, Academy of Sciences
                         of the Czech Republic
DOCUMENT TYPE:           Journal
```

LANGUAGE: English

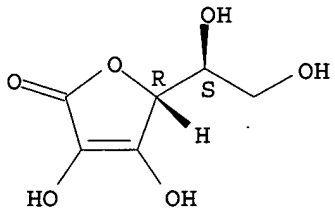
AB Effect of free radical scavengers and metal **chelators** on polyethylene glycol (PEG, osmotic potential -1.5 MPa) induced oxidative damage in detached rice leaves was investigated. PEG treatment resulted in a decrease in relative water content and an increase in proline content, and lipid peroxidn. PEG treatment also decreased chlorophyll and protein contents. Free radical scavengers (ascorbate, sodium benzoate, reduced glutathione, and thiourea) retarded and metal **chelators** [2,2'-bipyridine (BP), 8-hydroxyquinoline, and 1,10-phenanthroline] prevented PEG-induced oxidative damage. Furthermore, the protective effect of BP was reversed by adding Fe2+ and Cu2+, but not by Mn2+ or Zn2+. The protective effect of BP is most likely mediated through **chelation** of iron. It seems that oxidative damage induced by PEG may require the participation of iron.

IT **50-81-7**, Ascorbic acid, biological studies **148-24-3**, 8-Hydroxyquinoline, biological studies
RL: AGR (Agricultural use); BSU (Biological study, unclassified); BIOL (Biological study); USES (Uses)
(protective effect of free radical scavengers and metal **chelators** on oxidative damaged rice leaves)

RN 50-81-7 HCAPLUS

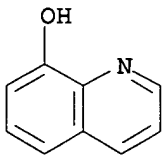
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 148-24-3 HCAPLUS

CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **7439-89-6**, Iron, biological studies **7439-96-5**, Manganese, biological studies **7440-50-8**, Copper, biological studies **7440-66-6**, Zinc, biological studies
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(role in induction of chlorophyll and protein loss in rice leaves caused by oxidative damage; protective effect of free radical scavengers and metal **chelators** on oxidative damaged rice leaves)

RN 7439-89-6 HCAPLUS

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7439-96-5 HCAPLUS
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2003:295276 HCAPLUS
DOCUMENT NUMBER: 138:312623
TITLE: Post clean treatment of metal or dielectric surfaces in the manufacture of wafers
INVENTOR(S): Small, Robert J.
PATENT ASSIGNEE(S): EKC Technology, Inc., USA
SOURCE: U.S., 20 pp., Cont.-in-part of U.S. 6,156,661.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 14
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6546939	B1	20030415	US 2000-704688	20001103
US 5279771	A	19940118	US 1990-610044	19901105
US 5334332	A	19940802	US 1992-911102	19920709
US 5981454	A	19991109	US 1997-801911	19970214
US 5911835	A	19990615	US 1997-826257	19970327
US 6156661	A	20001205	US 1999-384946	19990827

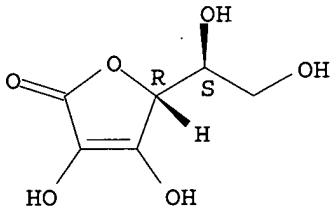
PRIORITY APPLN. INFO.:
US 1990-610044 A2 19901105
US 1992-911102 A2 19920709
US 1993-78657 B3 19930621
US 1995-443265 B1 19950517
US 1997-801911 A3 19970214
US 1997-826257 A2 19970327
US 1999-384946 A2 19990827

OTHER SOURCE(S): MARPAT 138:312623
AB A compn. for removal of chem. residues from metal or dielec. surfaces or for chem. mech. polishing of a copper or aluminum surface is an aq. soln.

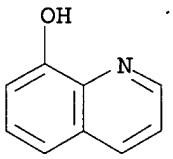
with a pH between about 3.5 and about 7. The compn. contains a monofunctional, difunctional or trifunctional org. acid and a buffering amt. of a quaternary amine, ammonium hydroxide, hydroxylamine, hydroxylamine salt, hydrazine or hydrazine salt base. A method in accordance with the invention for removal of chem. residues from a metal or dielec. surface comprises contacting the metal or dielec. surface with the above compn. for a time sufficient to remove the chem. residues. A method in accordance with the invention for chem. mech. polishing of a copper or aluminum surface comprises applying the above compn. to the copper or aluminum surface, and polishing the surface in the presence of the compn.

IT **50-81-7**, Ascorbic acid, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(amine compd.-buffered org. acids for post clean treatment of metal or dielec. surfaces in manuf. of wafers)
RN 50-81-7 HCAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **148-24-3**, 8-Hydroxyquinoline, uses
RL: MOA (Modifier or additive use); USES (Uses)
(**chelating** agent; amine compd.-buffered org. acids for post clean treatment of metal or dielec. surfaces in manuf. of wafers)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **7440-50-8**, Copper, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(wafer blanket; amine compd.-buffered org. acids for post clean treatment of metal or dielec. surfaces in manuf. of wafers)
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

REFERENCE COUNT: 73 THERE ARE 73 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 2001:300515 HCAPLUS
DOCUMENT NUMBER: 134:300833
TITLE: Compositions containing pyroglutamic acid for prevention and treatment of cold and influenza-like symptoms and their methods of use
INVENTOR(S): Rennie, Paul John; King, Simon Phillip; Biedermann, Kimberly Ann; Morgan, Jeffrey Michael
PATENT ASSIGNEE(S): The Procter & Gamble Company, USA
SOURCE: PCT Int. Appl., 15 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 25
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001028556	A2	20010426	WO 2000-US28856	20001019
WO 2001028556	A3	20011011		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1242073	A2	20020925	EP 2000-973658	20001019
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003512325	T2	20030402	JP 2001-531386	20001019
NO 2002001830	A	20020418	NO 2002-1830	20020418

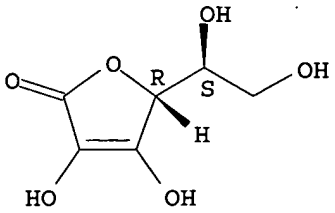
PRIORITY APPLN. INFO.: US 1999-421131 A 19991019
WO 2000-US28856 W 20001019

AB Nasal compns. for prevention and treatment of cold and influenza-like symptoms due to respiratory tract viral infections based on pyroglutamic acid (0.01-20%) and an org. acid having a dissocn. const. (pKa) of 3.0-5.0 are described. These compds. and their method of application are effective in both preventing the onset of the symptoms of colds and influenza or significantly mitigating them if already afflicted with such symptoms. A nasal spray compn. was prepd. contg. (by wt.) pyroglutamic acid 1.00%, ascorbic acid 1.00%, phytic acid as a **chelating** agent 1.00%, a mucoadhesive polymer (Carbopol 980) 1.00%, eucalyptol 0.01%, Ph Et alc. 0.50%, and water up to 100%, resp. The pH was adjusted to 3.5 with addn. of NaOH. A recommended dosage was 100 .mu.L of the soln. into each nostril three times a day.

IT **50-81-7**, Ascorbic acid, biological studies **50-81-7D**, Ascorbic acid, salts **557-34-6**, Zinc acetate
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)

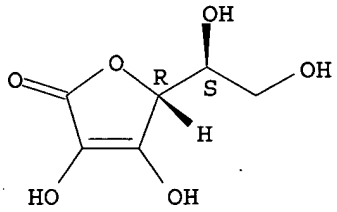
RN 50-81-7 HCAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

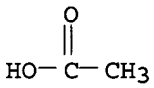


RN 50-81-7 HCAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

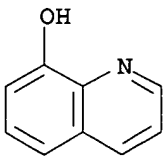


RN 557-34-6 HCAPLUS
CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

IT **148-24-3**, 8-Hydroxyquinoline, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L60 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:784331 HCAPLUS

DOCUMENT NUMBER: 132:20747
TITLE: Surface regeneration of biosensors using a combination of solutions based on interaction-specific optimized processes
INVENTOR(S): Andersson, Karl; Hamalainen, Markku; Malmqvist, Magnus; Roos, Hakan
PATENT ASSIGNEE(S): Biacore AB, Swed.
SOURCE: PCT Int. Appl., 133 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9963333	A1	19991209	WO 1999-SE921	19990531
W: AU, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 6289286	B1	20010911	US 1998-87402	19980529
AU 9946658	A1	19991220	AU 1999-46658	19990531
AU 755181	B2	20021205		
EP 1082607	A1	20010314	EP 1999-930044	19990531
R: BE, CH, DE, FR, GB, LI, NL, SE, FI				
JP 2002517720	T2	20020618	JP 2000-552490	19990531

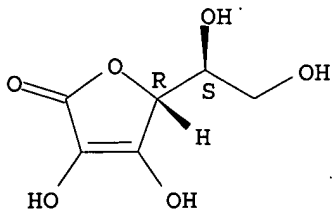
PRIORITY APPLN. INFO.: US 1998-87402 A 19980529
WO 1999-SE921 W 19990531

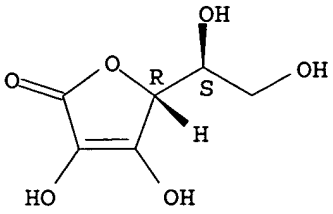
AB Surface regeneration of affinity biosensors and characterization of biomols. assocd. therewith by multivariate technique employing cocktails of regeneration agents to optimize regeneration of biosensor surface and/or characterize biomols. assocd. therewith. Kits and stock solns. for use in the context of this invention, as well as assocd. computer algorithms are also disclosed. Stock solns. of regeneration cocktails are prepd. and combined. Solns. are acidic, basic, ionic, org., detergent and **chelating** agent contg. Biosensors for various affinity bindings are regenerated by the method; the affinity reactions are used for optimizing the regeneration process. Immuno-reactions, nucleic acid hybridization, avidin/streptavidin-biotin, hormone-hormone receptor interactions are performed with Biocore instruments and CM5 sensor chips.

IT **50-81-7**, L-Ascorbic acid, uses **67-68-5**, Dimethylsulfoxide, uses **148-24-3**, 8-Hydroxy quinoline, uses **20427-58-1**, Zinc hydroxide
RL: NUU (Other use, unclassified); USES (Uses)
(surface regeneration of biosensors using a combination of solns. based on interaction-specific optimized processes)

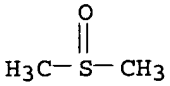
RN 50-81-7 HCAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

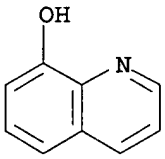




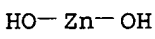
RN 67-68-5 HCAPLUS
CN Methane, sulfinylbis- (9CI) (CA INDEX NAME)



RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 20427-58-1 HCAPLUS
CN Zinc hydroxide (Zn(OH)2) (9CI) (CA INDEX NAME)



REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:718955 HCAPLUS
DOCUMENT NUMBER: 131:331072
TITLE: Composition for removing chemical residues from metal or dielectric surfaces in semiconductor device fabrication
INVENTOR(S): Small, Robert J.
PATENT ASSIGNEE(S): EKC Technology, Inc., USA
SOURCE: U.S., 16 pp., Cont.-in-part of U.S. 826,257.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 14
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5981454	A	19991109	US 1997-801911	19970214

US 5911835	A	19990615	US 1997-826257	19970327
TW 396202	B	20000701	TW 1998-87101918	19980212
WO 9836045	A1	19980820	WO 1998-US2794	19980214
W: CN, ID, JP, KR, SG				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 909311	A1	19990421	EP 1998-906398	19980214
EP 909311	B1	20030709		
R: AT, BE, CH, DE, DK, FR, GB, IT, LI, LU, IE, FI				
JP 2001500922	T2	20010123	JP 1998-535936	19980214
AT 244751	E	20030715	AT 1998-906398	19980214
US 6156661	A	20001205	US 1999-384946	19990827
US 6546939	B1	20030415	US 2000-704688	20001103

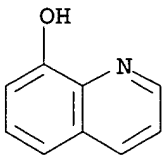
PRIORITY APPLN. INFO.:

US 1993-78657	A3	19930621
US 1995-443265	B1	19950517
US 1997-826257	A2	19970327
US 1990-610044	A2	19901105
US 1992-911102	A2	19920709
US 1997-801911	A	19970214
WO 1998-US2794	W	19980214
US 1999-384946	A2	19990827

AB A compn. for removal of chem. residues from metal or dielec. surfaces or for chem. mech. polishing of a Cu surface is an aq. soln. with a pH between .apprx.3.5 and .apprx.7. The compn. contains a monofunctional, difunctional, or trifunctional org. acid and a buffering amt. of a quaternary amine, NH4OH, hydroxylamine, hydroxylamine salt, hydrazine, or hydrazine salt base. A method for removal of chem. residues from a metal or dielec. surface comprises contacting the metal or dielec. surface with the above compn. for a time sufficient to remove the chem. residues. A method for chem. mech. polishing of a Cu surface comprises applying the above compn. to the Cu surface, and polishing the surface in the presence of the compn.

IT **148-24-3**, 8-Hydroxyquinoline, processes
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(**chelating** agent; compn. for removing chem. residues from metal or dielec. surfaces and for chem.-mech. polishing of copper in semiconductor device fabrication contg.)

RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **7440-50-8**, Copper, processes
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(compn. for chem.-mech. polishing of copper in semiconductor device fabrication)

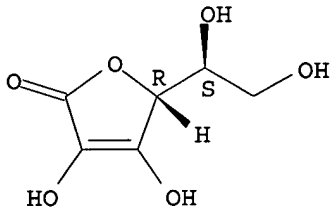
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

Cu

IT **50-81-7**, Ascorbic acid, processes
RL: NUU (Other use, unclassified); PEP (Physical, engineering or chemical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(compn. for removing chem. residues from metal or dielec. surfaces and for chem.-mech. polishing of copper in semiconductor device fabrication contg.)
RN 50-81-7 HCAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:511033 HCAPLUS
DOCUMENT NUMBER: 131:139492
TITLE: **Chelated** 8-hydroxyquinoline for the treatment of epithelial lesions
INVENTOR(S): Jordan, Russel T.; Hanson, Carl C.; Potestio, Frank S.
PATENT ASSIGNEE(S): Dermex Pharmaceuticals, LLC, USA
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9939721	A1	19990812	WO 1999-US2817	19990210
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2320628	AA	19990812	CA 1999-2320628	19990210
AU 9925956	A1	19990823	AU 1999-25956	19990210
AU 755521	B2	20021212		
EP 1052999	A1	20001122	EP 1999-905911	19990210
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, FI

NZ 506367	A	20030328	NZ 1999-506367	19990210
US 6476014	B1	20021105	US 2001-601304	20010102
US 2003113381	A1	20030619	US 2002-247161	20020918
US 2003114484	A1	20030619	US 2002-247526	20020918

PRIORITY APPLN. INFO.:

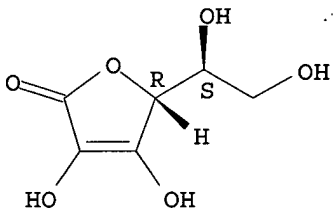
US 1998-21421	A2	19980210
WO 1999-US2817	W	19990210
US 2001-601304	A3	20010102

AB Oxinates including 8-hydroxyquinoline and a heavy metal are topically applied to epidermal lesions for therapeutic effect. The therapeutic compn. demonstrates selective toxicity with a therapeutic index of 100% on human lung cancer, breast cancer, melanoma, venereal warts, male veruoca warts, lesions produced by human papilloma virus, basal cell carcinoma, solar keratosis, and Kaposi's sarcoma. In veterinary applications where dogs, cats, and horses are the patients, the compn. shows a 100% therapeutic index with selective toxicity against eye cancer, sarcoids, sarcoma, malignant melanoma, rectal adenoma, histiocytoma, and sebaceous adenoma.

IT **50-81-7**, L-Ascorbic acid, biological studies **50-81-7D**, Ascorbic acid, derivs. **500-38-9 500-38-9D**, derivs.
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(antioxidant; **chelated** hydroxyquinoline for treatment of epithelial lesions)

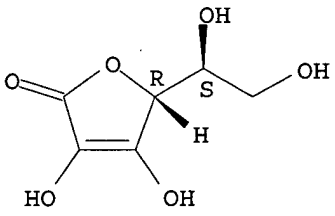
RN 50-81-7 HCAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

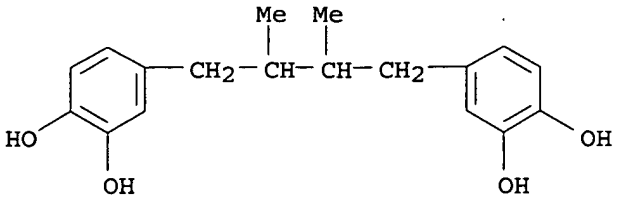


RN 50-81-7 HCAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

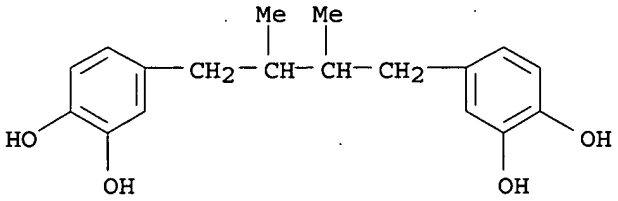
Absolute stereochemistry.



RN 500-38-9 HCAPLUS
CN 1,2-Benzenediol, 4,4'-(2,3-dimethyl-1,4-butanediyl)bis- (9CI) (CA INDEX NAME)

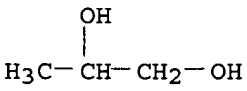


RN 500-38-9 HCAPLUS
CN 1,2-Benzenediol, 4,4'-(2,3-dimethyl-1,4-butanediyl)bis- (9CI) (CA INDEX NAME)

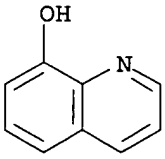


IT **57-55-6D**, Propylene glycol, polyoxyalkylene ether derivs.
148-24-3D, 8-Hydroxyquinoline, **chelates**
7439-89-6D, Iron, **chelates** with 8-hydroxyquinoline, biological studies **7439-96-5D**, Manganese, **chelates** with 8-hydroxyquinoline, biological studies **7439-98-7D**, Molybdenum, **chelates** with 8-hydroxyquinoline, biological studies **7440-48-4D**, Cobalt, **chelates** with 8-hydroxyquinoline, biological studies **7440-50-8D**, Copper, **chelates** with 8-hydroxyquinoline, biological studies **13978-85-3**, Zinc 8-hydroxyquinolinate
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**chelated** hydroxyquinoline for treatment of epithelial lesions)

RN 57-55-6 HCAPLUS
CN 1,2-Propanediol (8CI, 9CI) (CA INDEX NAME)



RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 7439-96-5 HCAPLUS
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

RN 7439-98-7 HCAPLUS
CN Molybdenum (8CI, 9CI) (CA INDEX NAME)

Mo

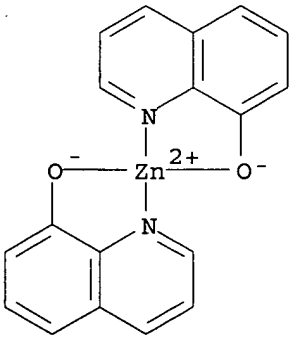
RN 7440-48-4 HCAPLUS
CN Cobalt (8CI, 9CI) (CA INDEX NAME)

Co

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

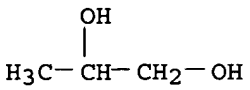
Cu

RN 13978-85-3 HCAPLUS
CN Zinc, bis(8-quinolinolato-.kappa.N1,.kappa.O8)-, (T-4)- (9CI) (CA INDEX NAME)



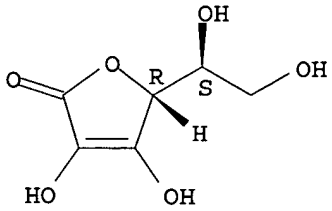
IT **57-55-6**, 1,2-Propanediol, biological studies **134-03-2**, Sodium ascorbate **4468-02-4**, Zinc gluconate
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(**chelated** hydroxyquinoline for treatment of epithelial lesions)

RN 57-55-6 HCAPLUS
CN 1,2-Propanediol (8CI, 9CI) (CA INDEX NAME)



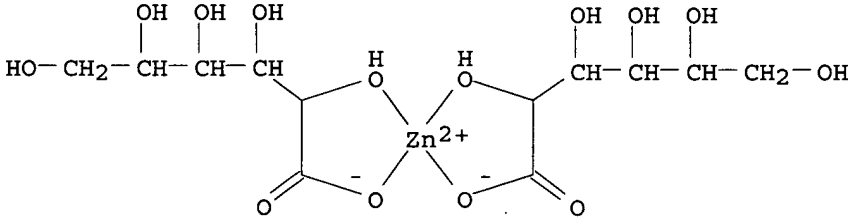
RN 134-03-2 HCAPLUS
CN L-Ascorbic acid, monosodium salt (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.

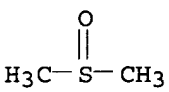


● Na

RN 4468-02-4 HCAPLUS
CN Zinc, bis(D-gluconato-.kappa.O1,.kappa.O2)-, (T-4)- (9CI) (CA INDEX NAME)

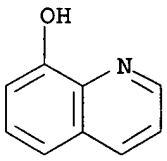


IT **67-68-5**, Dimethyl sulfoxide, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(penetrant; **chelated** hydroxyquinoline for treatment of epithelial lesions)
RN 67-68-5 HCAPLUS
CN Methane, sulfinylbis- (9CI) (CA INDEX NAME)



IT **148-24-3**, 8-Hydroxyquinoline, reactions **7646-85-7**, Zinc chloride, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction; **chelated** hydroxyquinoline for treatment of

epithelial lesions)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

Cl—Zn—Cl

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:197363 HCAPLUS
DOCUMENT NUMBER: 128:262004
TITLE: Hydrogen peroxide disinfecting and sterilizing compositions
INVENTOR(S): Scoville, John R., Jr.; Novicova, Inna A.
PATENT ASSIGNEE(S): Cottrell, Ltd., USA
SOURCE: PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9811777	A1	19980326	WO 1997-US16421	19970917
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9744195	A1	19980414	AU 1997-44195	19970917
EP 957683	A1	19991124	EP 1997-942512	19970917
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001506971	T2	20010529	JP 1998-514826	19970917
BR 9712070	A	20020115	BR 1997-12070	19970917
US 5900256	A	19990504	US 1998-24881	19980217

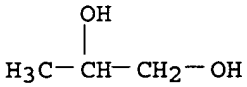
PRIORITY APPLN. INFO.: US 1996-715337 A 19960918
WO 1997-US16421 W 19970917

AB An aq. acidic disinfecting and sterilizing compn. for medical instruments, which may include brass, copper, aluminum, stainless steel, plastic and

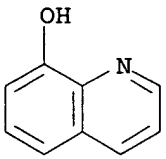
ceramic components. The compn. contains hydrogen peroxide, peracetic acid, a corrosion inhibitor system, a surfactant and a stabilizer. These compns. have in use stability and are effective as a disinfectant and/or sterilant either at room or when heated. For other applications, surfactants, sequestering agents and stabilizers may be optional. A compn. was prepd. contg. H2O2 7.3, peracetic acid 0.23, 1-hydroxyethylidene-1,1-diphosphonic acid 0.70, 8-hydroxyquinoline 0.0035, propylene glycol 4.10, nonylphenol surfactant 0.002, 1,2,3-benzotriazole 1.00, Na nitrite 0.25, Na molybdate 0.25% by wt. and deionized water to 100%.

IT **57-55-6**, Propylene glycol, biological studies **148-24-3**, 8-Quinolinol, biological studies **7631-95-0**, Sodium molybdate
RL: MOA (Modifier or additive use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(hydrogen peroxide disinfecting and sterilizing compns.)

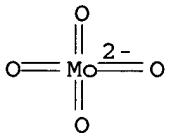
RN 57-55-6 HCAPLUS
CN 1,2-Propanediol (8CI, 9CI) (CA INDEX NAME)



RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7631-95-0 HCAPLUS
CN Molybdate (MoO42-), disodium, (T-4)- (9CI) (CA INDEX NAME)



●2 Na^+

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L60 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:212832 HCAPLUS
DOCUMENT NUMBER: 124:282863
TITLE: The environment of the lipoxygenase iron binding site explored with novel hydroxypyridinone iron

chelators

AUTHOR(S): Abeysinghe, Rajeewa D.; Roberts, Pamela J.; Cooper, Chris E.; MacLean, Kirsteen H.; Hider, Robert C.; Porter, John B.

CORPORATE SOURCE: Dep. Clinical Hematol., Univ. Coll. London Med. Sch., London, WC1E 6HX, UK

SOURCE: Journal of Biological Chemistry (1996), 271(14), 7965-72
CODEN: JBCHA3; ISSN: 0021-9258

PUBLISHER: American Society for Biochemistry and Molecular Biology

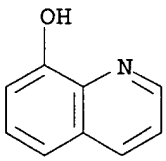
DOCUMENT TYPE: Journal

LANGUAGE: English

AB The mechanisms of lipoxygenase inhibition by iron **chelators** have been investigated in human neutrophils and in isolated soybean lipoxygenase. Their Fe(III)-contg. active sites have been targeted by synthesizing novel bidentate **chelators** from the hydroxypyridinone family sufficiently small to gain access through the hydrophobic channels of lipoxygenase. In stimulated human neutrophils, release of [3H]arachidonate-labeled eicosanoids is dependent on the lipid soly. of hydroxypyridinones, but larger hexadentate **chelators** have no effect on this or on total cellular leukotriene B4 prodn. Lipophilic hydroxypyridinones inhibit 5-lipoxygenase at equiv. concns. to the established inhibitor, piriprost, and show addnl. but minor anti-phospholipase A2 activity. Soybean 15-lipoxygenase inhibition is also dependent on the lipid soly. and coordination structure of **chelators**. Inhibition is assocd. with the formation of **chelate**-iron complexes, which are removed by dialysis without restoration of enzyme activity. Only after adding back iron is activity restored. ESR studies show the removal of the iron center signal (g = 6) is concomitant with formation of Fe(III)-**chelator** complexes, identical in spectral shape and g value to 3:1 hydroxypyridinone Fe(III) complexes. Removal of iron is not the only mechanism by which hydroxypyridinones can inhibit lipoxygenase in intact cells, however, as a lipophilic non-iron-binding hydroxypyridinone, which shows no inhibition of the soybean lipoxygenase activity, partially inhibits 5-lipoxygenase in intact neutrophils without inhibiting neutrophil phospholipase A2.

IT **148-24-3**, Oxine, biological studies **7439-89-6**, Iron, biological studies **9001-84-7**, Phospholipase A2
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(mechanism inhibition of arachidonate lipoxygenase by novel hydroxypyridinone iron **chelators** in vitro and in neutrophils)

RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

Fe

RN 9001-84-7 HCAPLUS
CN Phospholipase A2 (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L60 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:568995 HCAPLUS
DOCUMENT NUMBER: 123:137169
TITLE: Tetrahydropterin Reactions of Dioxo-Molybdenum(6+) Complexes: Does Redox Occur?
AUTHOR(S): Burgmayer, Sharon J. Nieter; Arkin, Michelle R.; Bostick, Laura; Dempster, Sara; Everett, Kristin M.; Layton, Heather L.; Paul, Kateri E.; Rogge, Cory; Rheingold, Arnold L.
CORPORATE SOURCE: Department of Chemistry, Bryn Mawr College, Bryn Mawr, PA, 19010, USA
SOURCE: Journal of the American Chemical Society (1995), 117(21), 5812-23
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
AB This report describes our continued investigation of reactions between tetrahydropterins and dioxo-molybdenum complexes. We report the results of structural, reactivity, and theor. expts. that indicate these reduced molybdenum-pterin complexes are better described as Mo(6+)-H4pterin rather than Mo(4+)-H2pterin as previously assigned. Both Mulliken charges calcd. using the extended Huckel MO method and the bond valence sum method predict a formal molybdenum oxidn. state midway between 5+ and 6+. The complexes Mo2O4Cl2(tetrahydro-6,7-dimethylpterin)2, MoOCl3(tetrahydro-6,7-dimethylpterin), and MoOCl2(tetrahydro-6-(hydroxymethyl)pterin)(diethyldithiocarbamate) have been characterized by 1H NMR, IR, UV/vis., and cond. measurements. The x-ray crystal structure is reported for Mo2O4Cl2(tetrahydro-6,7-dimethylpterin)2.cntdot.4DMF. Inner coordination sphere bond distances indicate substantial electron d. is donated from the pterin N(5) to Mo. These complexes undergo solvation and ligand substitution reactions. It is shown that solvation is assocd. with acid-base reactions at the tetrahydropterin ligands. The molybdenum-tetrahydropterin complexes show a variety of reactivities toward the oxidants O2, 2,6-dichloroindophenol, and DMSO. This study shows that tetrahydropterin has a high affinity to **chelate** Mo(6+) if one of the two oxo ligands is removed and that coordination to molybdenum stabilizes tetrahydropterins toward oxidn. Results from this study also suggest that dioxo-Mo(VI) coordination to tetrahydropterin is unlikely.
IT **16065-87-5**, Molybdenum(6+), biological studies
RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(synthesis and redox reactions of tetrahydropterin dioxo-molybdenum(6+) complexes as models for molybdoenzyme MoCo)
RN 16065-87-5 HCAPLUS
CN Molybdenum, ion (Mo6+) (8CI, 9CI) (CA INDEX NAME)

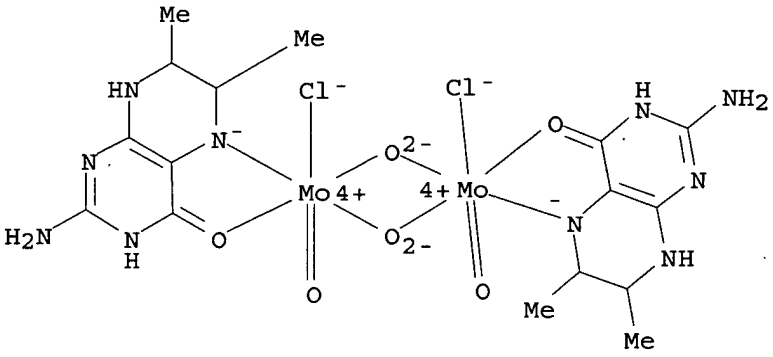
Mo^{6+}

Mo^{6+}

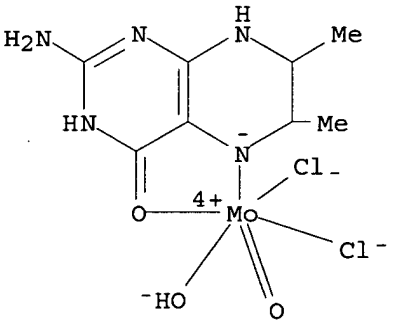
IT **7439-98-7DP**, Molybdenum, dioxo, complexes with tetrahydropterin
166331-14-2P 166331-15-3P 166331-16-4P
166331-17-5P 166331-18-6P
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and redox reactions of tetrahydropterin dioxo-molybdenum(6+) complexes as models for molybdoenzyme MoCo)
RN 7439-98-7 HCAPLUS
CN Molybdenum (8CI, 9CI) (CA INDEX NAME)

Mo

RN 166331-14-2 HCAPLUS
CN Molybdenum, bis(2-amino-5,6,7,8-tetrahydro-6,7-dimethyl-4(1H)-pteridinonato-N5,O4)dichlorodi-.mu.-oxodioxodi-, stereoisomer (9CI) (CA INDEX NAME)

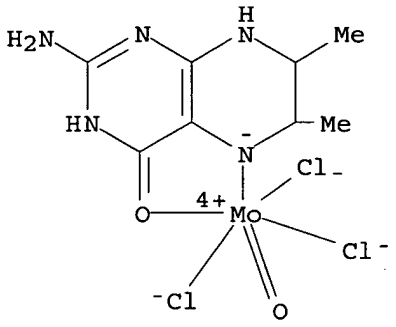


RN 166331-15-3 HCAPLUS
CN Molybdenum, (2-amino-5,6,7,8-tetrahydro-6,7-dimethyl-4(1H)-pteridinonato-N5,O4)dichlorohydroxyoxo-, [OC-6-14-(cis)]- (9CI) (CA INDEX NAME)

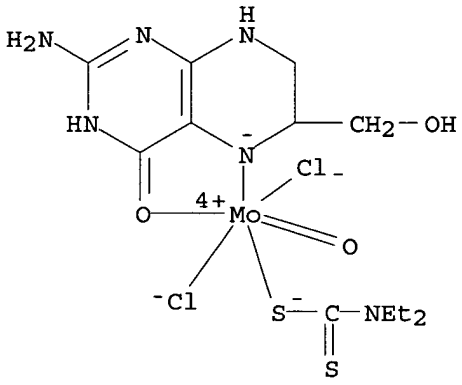


RN 166331-16-4 HCAPLUS
CN Molybdenum, [rel-(6R,7S)-2-amino-5,6,7,8-tetrahydro-6,7-dimethyl-4(1H)-

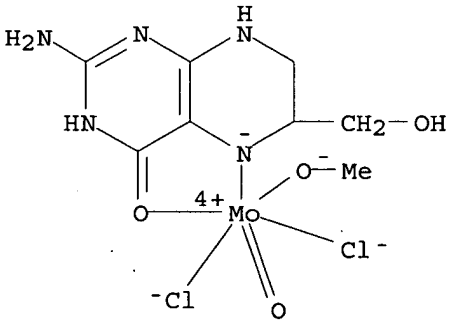
pteridinonato-.kappa.N5,.kappa.O4]trichlorooxo-, (OC-6-41)- (9CI) (CA INDEX NAME)



RN 166331-17-5 HCAPLUS
CN Molybdenum, [2-amino-5,6,7,8-tetrahydro-6-(hydroxymethyl)-4(1H)-pteridinonato-N5,O4]dichloro(diethylcarbamodithioato-S)oxo- (9CI) (CA INDEX NAME)

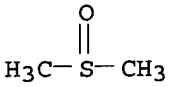


RN 166331-18-6 HCAPLUS
CN Molybdenum, [2-amino-5,6,7,8-tetrahydro-6-(hydroxymethyl)-4(1H)-pteridinonato-N5,O4]dichloromethoxyoxo- (9CI) (CA INDEX NAME)

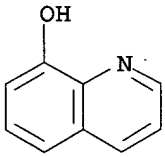


IT **67-68-5**, reactions **148-24-3**, 8-Hydroxyquinoline,
reactions **13637-68-8 17524-05-9 19680-83-2**
75780-89-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis and redox reactions of tetrahydropterin dioxo-molybdenum(6+) complexes as models for molybdoenzyme MoCo)

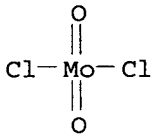
RN 67-68-5 HCAPLUS
CN Methane, sulfinylbis- (9CI) (CA INDEX NAME)



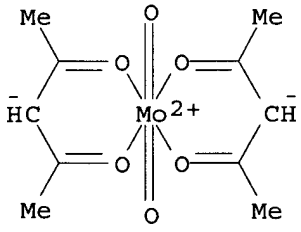
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



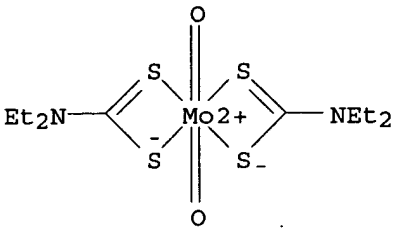
RN 13637-68-8 HCAPLUS
CN Molybdenum chloride oxide (MoCl2O2), (T-4)- (9CI) (CA INDEX NAME)



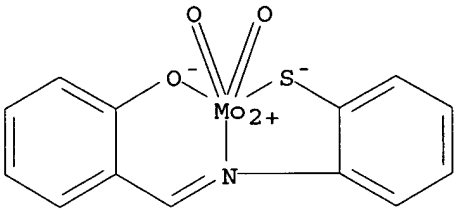
RN 17524-05-9 HCAPLUS
CN Molybdenum, dioxobis(2,4-pentanedionato-.kappa.O,.kappa.O')-, (OC-6-21)-
(9CI) (CA INDEX NAME)



RN 19680-83-2 HCAPLUS
CN Molybdenum, bis(diethylcarbamodithioato-.kappa.S,.kappa.S')dioxo-,
(OC-6-21)- (9CI) (CA INDEX NAME)



RN 75780-89-1 HCAPLUS
CN Molybdenum, [2-[1-[[2-(mercapto-.kappa.S)phenyl]imino-.kappa.N]ethyl]phenolato(2-)-.kappa.O]dioxo-, (SP-5-32)- (9CI) (CA INDEX NAME)

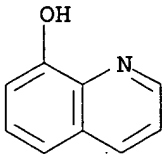


L60 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1985:464009 HCAPLUS
DOCUMENT NUMBER: 103:64009
TITLE: Behavior of extracts of thallium, indium, beryllium, and molybdenum **chelates** in a graphite furnace during atomic absorption analysis
AUTHOR(S): Samchuk, A. I.
CORPORATE SOURCE: Inst. Geokhim. Fiz. Miner., Kiev, USSR
SOURCE: Ukrainskii Khimicheskii Zhurnal (Russian Edition) (1985), 51(3), 287-91
CODEN: UKZHAU; ISSN: 0041-6045
DOCUMENT TYPE: Journal
LANGUAGE: Russian
AB The at. absorption signal is a function of several parameters, such as the **chelating** agent, solvent, thermal treatment temp., and spectral buffer. The highest and lowest signals were obsd. for exts. in C6H6 and CCl4, resp. Ascorbic acid is the best spectral buffer.
IT **7439-98-7**, analysis
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, by extn. and furnace at. absorption, **chelate** behavior in)
RN 7439-98-7 HCAPLUS
CN Molybdenum (8CI, 9CI) (CA INDEX NAME)

Mo

IT **148-24-3D, chelates 7439-98-7D, chelates**
RL: ANST (Analytical study)
(exts. of, in furnace at. absorption anal.)

RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)

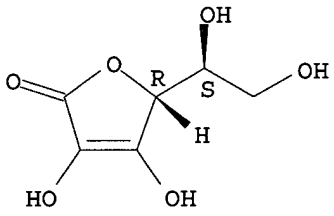


RN 7439-98-7 HCAPLUS
CN Molybdenum (8CI, 9CI) (CA INDEX NAME)

Mo

IT **50-81-7**, uses and miscellaneous
RL: USES (Uses)
(in furnace at. absorption anal. of metal **chelate** exts.)
RN 50-81-7 HCAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L60 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1985:167381 HCAPLUS
DOCUMENT NUMBER: 102:167381
TITLE: Preventing deposition of polymer scale and a coating agent therefor
INVENTOR(S): Shimizu, Toshihide; Kaneko, Ichiro; Shimakura, Yoshiteru
PATENT ASSIGNEE(S): Shin-Etsu Chemical Industry Co., Ltd. , Japan
SOURCE: Eur. Pat. Appl., 39 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

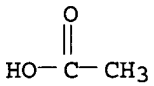
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 126991	A1	19841205	EP 1984-104755	19840427
R: BE, DE, FR, GB, IT, NL				
JP 59202201	A2	19841116	JP 1983-75557	19830428
JP 63056882	B4	19881109		

US 4539230 A 19850903 US 1984-601052 19840416
PRIORITY APPLN. INFO.: JP 1983-75557 19830428

AB Polymer scale buildup on reactor walls in the emulsion polymn. of ethylenically unsatd. monomers is prevented by coating the walls with a compn. consisting of an org. compd. having .gtoreq.5 conjugated .pi. bonds, a **chelating** agent, a metal compd. capable of producing metal ions having coordination no. .gtoreq.2, and optionally a silicic compd., dissolved or dispersed in a solvent, and drying the coating. Thus, a 0.5% coating compn. consisting of 60 parts C.I. Solvent Black 7 [8005-02-5], 25 parts o-phenanthroline [66-71-7], and 15 parts FeCl2 in a 80:20 water-MeOH mixt. was coated on a stainless steel polymn. reactor and dried 30 min at 50.degree.. A mixt. of 40 kg water, 10 kg butadiene, 10 kg styrene, 400 g acrylic acid, 600 g Na lauryl sulfate, 500 g tert-dodecyl mercaptan, and 100 g K2S2O8 was agitated 8 h at 60.degree. to give a polymer [25085-39-6] slurry which left no scale deposition on the reactor wall, compared with 1200 g/m2 for a similar polymn. in an uncoated reactor.

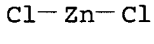
IT **557-34-6 7646-85-7**, uses and miscellaneous
RL: USES (Uses)
(coatings, contg. **chelating** agents and .pi. bond-contg. compds., for scale prevention in emulsion polymn. of unsatd. compds.)

RN 557-34-6 HCAPLUS
CN Acetic acid, zinc salt (8CI, 9CI) (CA INDEX NAME)



●1/2 Zn

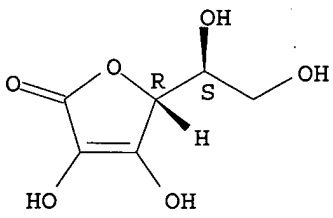
RN 7646-85-7 HCAPLUS
CN Zinc chloride (ZnCl2) (9CI) (CA INDEX NAME)

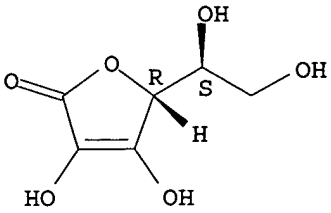


IT **50-81-7**, uses and miscellaneous **148-24-3**, uses and miscellaneous
RL: USES (Uses)
(coatings, contg. .pi. bond-contg. compds. and metal compds., for scale prevention in emulsion polymn. of unsatd. compds.)

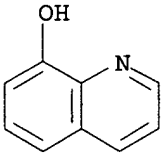
RN 50-81-7 HCAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.





RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



L60 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1983:220196 HCAPLUS
DOCUMENT NUMBER: 98:220196
TITLE: Additives in electroless copper coating. I
AUTHOR(S): Lu, Wuchen
CORPORATE SOURCE: Inst. Surface Technol., Northeast. Inst. Technol., Shenyang, Peop. Rep. China
SOURCE: Dongbei Gongxueyuan Xuebao (1982), 33, 29-51
CODEN: THYPDK; ISSN: 0253-4258
DOCUMENT TYPE: Journal
LANGUAGE: Chinese

AB The effects of additives applied to electroless Cu coating, i. e., compds. of different radicals contg. S, O, or N, were investigated. The exptl. results of different addn. agents, the stabilities of coating solns., deposition rates, and thickness of the Cu film were studied. Adding S- or N-contg. radical compds. in coating solns. gave better stability for the soln. Some complexes and **chelates** were formed by these addn. agents with Cu ions. Expts. for evaluating the stabilities of the coating solns. in which S- and N-contg. radical compds. were added together were performed with detn. of their deposition rates. The optimal amt. of addn. agents added in plating soln. was discussed in relation to such parameters as the temp. of the coating soln., coating time, and thickness of the Cu film.

IT **7440-50-8**, uses and miscellaneous
RL: USES (Uses)
(coating with, additives in electroless)

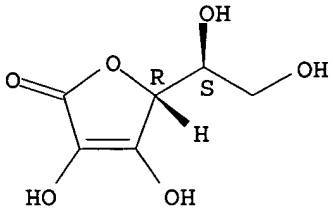
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

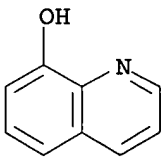
IT **50-81-7**, uses and miscellaneous **148-24-3**, uses and miscellaneous
RL: USES (Uses)

(copper electroless coating soln. contg.)
RN 50-81-7 HCAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



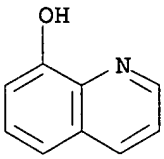
L60 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1980:403027 HCAPLUS
DOCUMENT NUMBER: 93:3027
TITLE: Tryptophan hydroxylase. The role of oxygen, iron, and sulfhydryl groups as determinants of stability and catalytic activity
AUTHOR(S): Kuhn, Donald M.; Ruskin, Belle; Lovenberg, Walter
CORPORATE SOURCE: Hypertension-Endocr. Branch, Natl. Heart, Lung, Blood Inst., Bethesda, MD, 20205, USA
SOURCE: Journal of Biological Chemistry (1980), 255(9), 4137-43
CODEN: JBCHA3; ISSN: 0021-9258
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Tryptophan hydroxylase (EC 1.14.16.4) from rat midbrain is inactivated upon exposure to O. The degree of inactivation is dependent both on the temp. and partial pressure of O to which the enzyme is exposed. Furthermore, mol. O, and not an O or OH radical, is responsible for the inactivation. Sulfhydryl compds. and reductants partially protect the hydroxylase from inactivation by O. Enzyme inhibited by O can be reconstituted by anaerobic incubation in the presence of dithiothreitol and Fe2+ at 25.degree., and in some expts. the inclusion of inorg. sulfide, in addn. to dithiothreitol and Fe2+, led to even greater recoveries of activity. Preincubation of tryptophan hydroxylase with various sulfhydryl reagents or disulfide compds. also produces inactivation which can be rapidly reversed by dithiothreitol. Tryptophan protects the enzyme from inactivation by sulfhydryl reagents and disulfides but not from inactivation by O. Finally, the enzyme was inhibited by a variety of Fe **chelators**. These results suggest that the catalytic activity of tryptophan hydroxylase is dependent on the

oxidn.-redn. status of SH groups and Fe sites, which are probably located at the catalytic (substrate-binding) site of the enzyme.

IT **7439-89-6**, biological studies
RL: BIOL (Biological study)
(of tryptophan hydroxylase of brain, activity in relation to)
RN 7439-89-6 HCAPLUS
CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

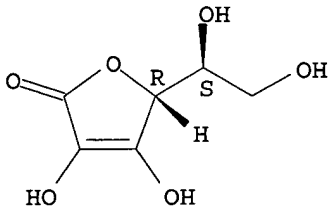
Fe

IT **148-24-3**, biological studies
RL: BIOL (Biological study)
(tryptophan hydroxylase of brain inhibition by)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **50-81-7**, biological studies
RL: BIOL (Biological study)
(tryptophan hydroxylase protection against oxygen inactivation by)
RN 50-81-7 HCAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



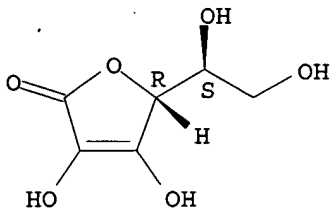
L60 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1979:18202 HCAPLUS
DOCUMENT NUMBER: 90:18202
TITLE: Specificity and essential groups in alhagain
AUTHOR(S): Yeshodha, K.; Dhar, S. C.; Santappa, M.
CORPORATE SOURCE: Cent. Leather Res. Inst., Madras, India
SOURCE: Leather Science (Madras) (1978), 25(2), 68-76
CODEN: LESCA9; ISSN: 0023-9771
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The effects of certain oxidizing, reducing, SH-group blocking agents, meal **chelating** agents, metallic ions, and certain other specific agents on the reactive groups and proteolytic activity of alhagain were studied.

The results show that the SH group of the enzyme may be essential for its activity. The specificity of alhagain was studied by quant. estg. the free amino acids, N- and C-terminal amino acids, of the peptides liberated from the hydrolysis of the B-chain oxidized insulin for 6 h. With ref. to the known structure of the B-chain, the major sites of action of alhagain were detd. The results indicate that alhagain preferentially attacks peptide bonds involving the amino or carboxyl groups of phenylalanine, amino groups of alanine and serine, and also carboxyl groups of lysine and glycine.

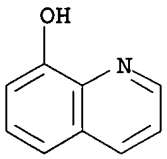
IT **50-81-7**, biological studies **148-24-3**, biological studies **7439-96-5**, biological studies **7440-50-8**, biological studies
RL: BIOL (Biological study)
(alhagain activation by)

RN 50-81-7 HCAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



RN 7439-96-5 HCAPLUS
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

IT **7439-89-6**, biological studies
RL: BIOL (Biological study)
(alhagain inhibition by)

RN 7439-89-6 HCAPLUS

CN Iron (7CI, 8CI, 9CI) (CA INDEX NAME)

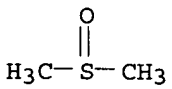
Fe

L60 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1976:170232 HCAPLUS
DOCUMENT NUMBER: 84:170232
TITLE: Rates of formation and dissociation, and the stability of some manganese (II) and zinc(II) complexes with bipyridyl-type ligands in dimethyl sulfoxide solution
AUTHOR(S): Buck, Dorothy M. W.; Moore, Peter
CORPORATE SOURCE: Dep. Mol. Sci., Univ. Warwick, Coventry, UK
SOURCE: Journal of the Chemical Society, Dalton Transactions: Inorganic Chemistry (1972-1999) (1976), (7), 638-42
CODEN: JCDTBI; ISSN: 0300-9246
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The rates of formation and dissocn. were detd. for 1:1 complexes of Mn2+ and Zn2+ with bipyridyl-type ligands in Me2SO soln. by the stopped-flow method at temps. just above the f.p. of Me2SO. In some cases the reactions are too fast to measure, e.g. the reaction between [Mn(Me2SO)6]2+ and 2,2'-bipyridine (L). Rate data were detd. for the formation and Hg2+-induced dissocns. of [MnL1(Me2SO)4]2+ (L1 = 1,10-phenanthroline) and [ZnL(Me2SO)4]2+, and their first stability consts. in Me2SO were estd. Rate consts. were estd. for Me2SO solvent exchange for Mn2+ and Zn2+. The reaction between a large excess of [Mn(Me2SO)6]2+ and 2,2':6',2"-terpyridine is complicated; an initial very rapid reaction is followed by a much slower process which was examd. by repetitive-scan spectrophotometry. The kinetics were detd. for the 2 steps and a mechanism was proposed in which the initial rapid reaction involves the formation of a binuclear intermediate and the slow step is assocd. with final **chelate**-ring closure.

IT **67-68-5**, uses and miscellaneous
RL: USES (Uses)
(coordination reaction of manganese and zinc with bipyridyl-type ligands in)

RN 67-68-5 HCAPLUS
CN Methane, sulfinylbis- (9CI) (CA INDEX NAME)



IT **7439-96-5**, reactions **7440-66-6**, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(coordination reaction of, with bipyridyl-type ligands in dimethyl sulfoxide)

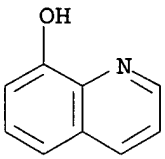
RN 7439-96-5 HCAPLUS
CN Manganese (8CI, 9CI) (CA INDEX NAME)

Mn

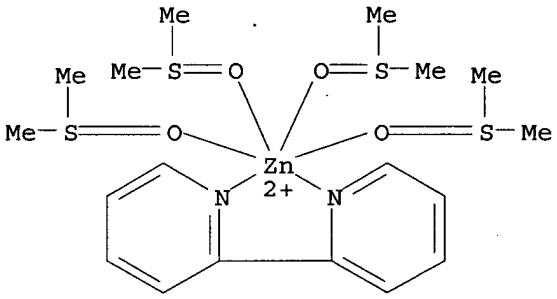
RN 7440-66-6 HCAPLUS
CN Zinc (7CI, 8CI, 9CI) (CA INDEX NAME)

Zn

IT **148-24-3**, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(coordination reaction of, with manganese)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **59538-19-1P**
RL: PREP (Preparation)
(formation and mercury-induced dissocn. of, kinetics of)
RN 59538-19-1 HCAPLUS
CN Zinc(2+), (2,2'-bipyridine-N,N')tetrakis[sulfinylbis[methane]-O]-, (OC-6-22)- (9CI) (CA INDEX NAME)

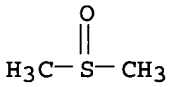


L60 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1972:558418 HCAPLUS
DOCUMENT NUMBER: 77:158418
TITLE: Influence of the host lattice upon EPR coupling parameters and d-d transitions of planar copper(II) complexes
AUTHOR(S): Ammeter, J.; Rist, G.; Guenthard, Hs. H.
CORPORATE SOURCE: Phys. Chem. Lab., Swiss Fed. Inst. Technol., Zurich, Switz.
SOURCE: Journal of Chemical Physics (1972), 57(9), 3852-66
CODEN: JCPSA6; ISSN: 0021-9606
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The EPR and optical spectra of 2 similar square-planar CuO2N2 **chelates**, Cu hydroxyquinolinate (CuOx2) and Cu picolinate (CuPic2)

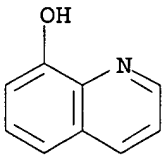
were investigated. By studying both mols. in a series of several paramagnetic and diamagnetic single crystal matrixes, powders and solns., the dependence of the g tensor, metal hyperfine (hfs) tensor, N-hfs tensor and the optical d-d transitions on the host lattice was detd. The exptl. results show the shortcomings of the simple LCAO model generally used to describe the electronic structure of metal complexes. The use of free ion (or atom) wavefunctions for example leads to large overestns. of the .pi.-delocalization parameters and of the amt. of g dependence on covalency. To obtain agreement with expt., a scaling parameter (as proposed by K. Ruedenberg in 1962) for the metal 3d part of the involved MO's should be introduced to account for the virtual expansion of the AO's in antibonding orbitals. Variations of the effective charge appear to be negligible. This expansion results in a smaller spin-orbit const. and a smaller .ltbbrac.r-3.rtbbrac.3d parameter. This effect contributes substantially to the generally obsd. reduced spin-orbit and metal hfs interactions in covalent transition metal complexes.

IT **67-68-5**, properties **148-24-3**, properties **13978-85-3 21264-38-0 22602-39-7 38745-22-1**
RL: PRP (Properties)
(ESR and electronic spectrum of copper complex in)

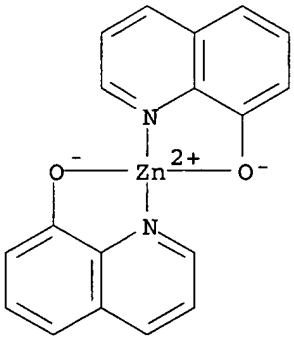
RN 67-68-5 HCAPLUS
CN Methane, sulfinylbis- (9CI) (CA INDEX NAME)

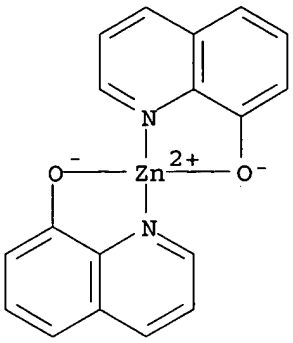


RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)

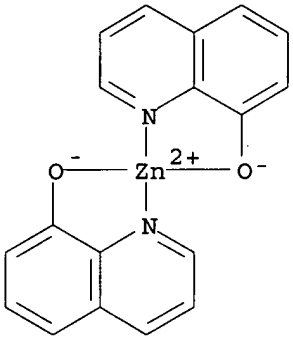


RN 13978-85-3 HCAPLUS
CN Zinc, bis(8-quinolinolato-.kappa.N1,.kappa.O8)-, (T-4)- (9CI) (CA INDEX NAME)





RN 21264-38-0 HCAPLUS
CN Zinc, bis(8-quinolinolato-.kappa.N1,.kappa.O8)-, (T-4)-, dihydrate (9CI) (CA INDEX NAME)

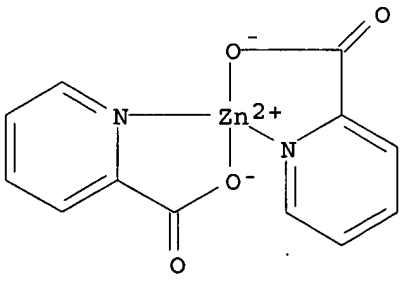


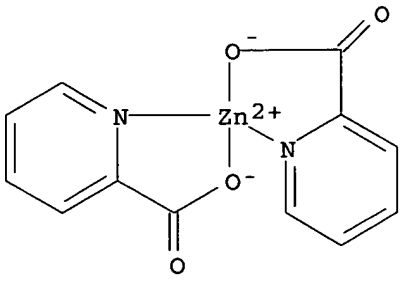
●2 H_2O

RN 22602-39-7 HCAPLUS
CN Zinc, bis(2-pyridinecarboxylato-N1,O2)-, (T-4)-, compd. with methanol (1:2) (9CI) (CA INDEX NAME)

CM 1

CRN 17949-65-4
CMF C12 H8 N2 O4 Zn
CCI CCS



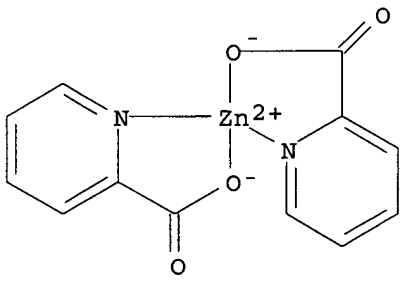


CM 2

CRN 67-56-1
CMF C H4 O

H_3C-OH

RN 38745-22-1 HCAPLUS
CN Zinc, bis(2-pyridinecarboxylato-N1,O2)-, tetra(hydrate-d2), (T-4)- (9CI) (CA INDEX NAME)



●4 D_2O

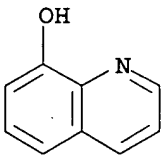
L60 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1965:14951 HCAPLUS
DOCUMENT NUMBER: 62:14951
ORIGINAL REFERENCE NO.: 62:2687d
TITLE: Catalytic effects of copper complexes on the oxidation of l-ascorbic acid
AUTHOR(S): Onishi, Isao; Hara, Tadashi
CORPORATE SOURCE: Doshisha Univ., Kyoto
SOURCE: Bulletin of the Chemical Society of Japan (1964), 37(9), 1317-20
CODEN: BCSJA8; ISSN: 0009-2673
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The stability consts. Ks of various kinds of Cu complexes were estd. on the basis of the decrease in the catalytic activity of Cu(II) in the

presence of **chelating** agents. The rate const. was inversely proportional to log [1 + Ks[.UPSILON.]n], where .UPSILON. is the concn. of dissocd. **chelating** agent.

IT **7440-50-8**, Copper
(compds., catalysts, in oxidn. of l-ascorbic acid)
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

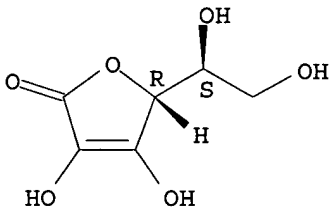
Cu

IT **148-24-3**, 8-Quinolinol
(copper complexes, effect on oxidn. of l-ascorbic acid)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



IT **50-81-7**, Ascorbic acid
(oxidn. of, Cu complexes in)
RN 50-81-7 HCAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



L60 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1963:436743 HCAPLUS
DOCUMENT NUMBER: 59:36743
ORIGINAL REFERENCE NO.: 59:6663c-e
TITLE: Properties of nicotinamide deamidase of pigeon liver extracts
AUTHOR(S): Curti, B.; Porcellati, G.
CORPORATE SOURCE: Univ. Cagliari, Italy
SOURCE: Giorn. Biochim. (1963), 12(1), 13-27
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable
AB An enzyme causing deamidation of nicotinamide (I) was demonstrated in liver and kidney exts. of pigeons. The activity of nicotinamide deamidase (II) was highest in the nuclei, less in the mitochondria and microsomes (Rajagopolon, et al., CA 52, 18756b). II was prepd. by extg. the

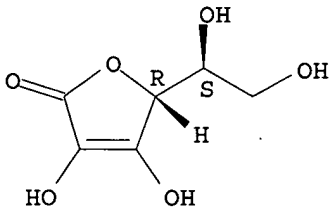
centrifuge ppt. obtained at 1400 g for 40 min. with BuOH, Me2CO, and Et2O. The resulting powder was treated with 0.2M phosphate buffer, pH 8.3, and centrifuged at 19,000 g for 2 hrs. Activity of the supernatant was 365 .gamma. NH3 formed per 2.77 mg. N/60 min. at 37.degree.. For enzymic activity the optimum pH is .apprx.8.3 and at this pH the Michaelis const. is 1.85 .times. 10-3M. The relative rates of deamidation were: I 100, L-glutamine 55, benzamide 50, L-asparagine 16, D-asparagine 8, nicotinamide adenine dinucleotide 8, benzyl-L-argininamide 8, thiourea 5, formamide 5, N-methylnicotinamide 5, L-arginine 3. II is inactive against hydrazine, leucylnaphthylamide, isonicotinthioamide, 6-aminonicotinamide, acetamide, urea, adenine, and nicotinic acid. II deamidates I-riboside 10 times more readily than I-mononucleotide. Among 11 investigated metals, Ag+ and Hg++ cause a complete, Cu++ a 72% inhibition of II. The following **chelates** had a strong inhibitory effect (%): .alpha.,.alpha.'-di-pyridyl 90, 8-quinolinol 90, o-phenanthroline 90, NaF 63, 6-aminonicotinamide 48, p-chloromercuribenzoic acid 42. The results are discussed in relation to the possible metabolism of I.

IT **7440-50-8**, Copper
(compds., nicotinamide deamidase inhibition by)
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

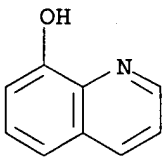
Cu

IT **50-81-7**, Ascorbic acid
(metabolism of, enzymes in)
RN 50-81-7 HCAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT **148-24-3**, 8-Quinolinol
(nicotinamide deamidase inhibition by)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)

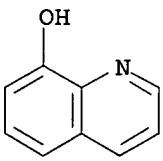


L60 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1961:54527 HCAPLUS
DOCUMENT NUMBER: 55:54527
ORIGINAL REFERENCE NO.: 55:10523g-i,10524a-b
TITLE: The catalysis of ascorbate oxidation by ionic copper and its complexes
AUTHOR(S): Butt, V. S.; Hallaway, Mary
CORPORATE SOURCE: Univ. Oxford, UK
SOURCE: Archives of Biochemistry and Biophysics (1961), 92, 24-32
CODEN: ABBIA4; ISSN: 0003-9861
DOCUMENT TYPE: Journal
LANGUAGE: Unavailable

AB With 1.0 and 21.8 mM ascorbate (I) and 0.034 mM Cu, the first-order constant was 35.2 .+-. 0.2 .times. 10-4 sec.-1 at 30.degree.. Below 0.020 mM the rate increases very rapidly with increase in the Cu content, above which a constant, but less rapid, increase was found. The rate constant increased with the O tension in the gas phase over the whole range up to 100% O. Between pH 3.3 and 7.4, the rate of I oxidn. increased steadily, the stimulation being more pronounced at 0.054 mM CuSO4 than at 0.01 mM. The phosphate buffer generally used was less inhibitory than most others effective at pH 5.5. At a ratio of 1 mole of **chelating** agent to 1 g. atom Cu, the rate was in each case reduced by 40-50%, although ethylenediaminetetraacetate (EDTA) reduced it by as much as 85%. At a ratio of 2:1, diethyldithiocarbamate and EDTA completely inhibited the oxidn.; oxine and ferron both required rather higher ratios. With quinaldinic acid, 1,10-phenathroline, and 2,2'-dipyridyl, oxidn. proceeded even at the highest concn. applied. At ratios above 2:1, both phenanthroline and dipyridyl modified the form of the reaction. The reaction proceeded according to zero-order kinetics with respect to I at first, but later changed to first-order. With increase in the concn. of **chelating** agent, the rates of the zero- and first-order reactions were each inhibited, and the I concn. at which the reaction order changed became greater. With thiourea, at molar ratios from 1:1 up to 10:1, the reaction was at first severely inhibited, but after a lag phase, the rate rapidly increased to the control level and first-order kinetics were followed. I oxidn. was completely inhibited with a CO (95%)-O2 (5%) mixt. Low levels of azide (azide to Cu < 5) did not alter the rate, but at the higher Cu concn., increase in azide induced stimulation up to a max., which then declined until, at 10 mM azide, the rate constant fell below that of the control. The stimulation was not observed at the lower Cu concn., even at the same **chelate** to Cu ratio, though some increase in rate was observed at much higher levels of azide. This suggests competition between azide and I. CN-, though effective at lower concns. and CN- to Cu ratios, is similar to azide.

IT **148-24-3**, 8-Quinolinol
(ascorbic acid oxidn. by Cu in presence of)
RN 148-24-3 HCAPLUS
CN 8-Quinolinol (7CI, 8CI, 9CI) (CA INDEX NAME)



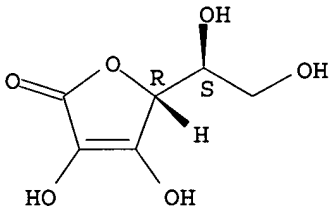
IT **7440-50-8**, Copper

(ascorbic acid oxidn. by, **chelating** agent effect on)
RN 7440-50-8 HCAPLUS
CN Copper (7CI, 8CI, 9CI) (CA INDEX NAME)

Cu

(compounds, ascorbic acid oxidn. by
IT **50-81-7**, Ascorbic acid
(oxidn. of, by Cu, effect of **chelating** agents on)
RN 50-81-7 HCAPLUS
CN L-Ascorbic acid (8CI, 9CI) (CA INDEX NAME)

Absolute stereochemistry.



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L18       165673 SEA FILE=REGISTRY ABB=ON  PLU=ON  ZN/ELS
L23            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  IRON/CN
L26            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  COBALT/CN
L27       263268 SEA FILE=REGISTRY ABB=ON  PLU=ON  MO/ELS
L29            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  MANGANESE/CN
L31            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  COPPER/CN
L32         2026 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L1 AND (L23 OR L18 OR L26 OR
                 L27 OR L29 OR L31)
L49            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  PROPYLENE GLYCOL/CN
L51           97 SEA FILE=REGISTRY ABB=ON  PLU=ON  LECITHIN?/CN
L52            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  DIMETHYL SULFOXIDE/CN
L53            1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "NORDIHYDROGUAIARETIC
                 ACID"/CN
L55              STR
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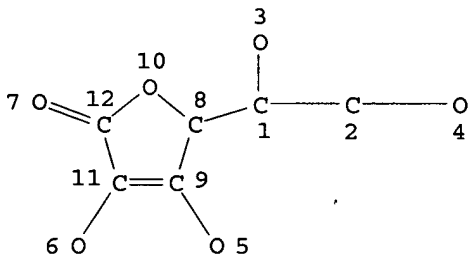


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NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS  12

STEREO ATTRIBUTES: NONE
L56         1025 SEA FILE=REGISTRY FAM FUL L55
L57          102 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L32 AND (L49 OR L51 OR L52 OR
                 L53 OR L56)
L58           11 SEA FILE=HCAPLUS ABB=ON  PLU=ON  L57 AND (BAC OR DMA OR PKT OR
                 PAC OR THU)/RL
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Therapeutic use

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=> d ibib ab hitind l58 1-11

L58  ANSWER 1 OF 11  HCAPLUS  COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER:         2001:300515  HCAPLUS
DOCUMENT NUMBER:          134:300833
TITLE:                    Compositions containing pyroglutamic acid for
                          prevention and treatment of cold and influenza-like
                          symptoms and their methods of use
INVENTOR(S):              Rennie, Paul John; King, Simon Phillip; Biedermann,
                          Kimberly Ann; Morgan, Jeffrey Michael
PATENT ASSIGNEE(S):       The Procter & Gamble Company, USA
SOURCE:                   PCT Int. Appl., 15 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
```

FAMILY ACC. NUM. COUNT: 25
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001028556	A2	20010426	WO 2000-US28856	20001019
WO 2001028556	A3	20011011		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
EP 1242073	A2	20020925	EP 2000-973658	20001019
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003512325	T2	20030402	JP 2001-531386	20001019
NO 2002001830	A	20020418	NO 2002-1830	20020418
PRIORITY APPLN. INFO.:			US 1999-421131 A	19991019
			WO 2000-US28856 W	20001019

AB Nasal compns. for prevention and treatment of cold and influenza-like symptoms due to respiratory tract viral infections based on pyroglutamic acid (0.01-20%) and an org. acid having a dissocn. const. (pKa) of 3.0-5.0 are described. These compds. and their method of application are effective in both preventing the onset of the symptoms of colds and influenza or significantly mitigating them if already afflicted with such symptoms. A nasal spray compn. was prepd. contg. (by wt.) pyroglutamic acid 1.00%, ascorbic acid 1.00%, phytic acid as a chelating agent 1.00%, a mucoadhesive polymer (Carbopol 980) 1.00%, eucalyptol 0.01%, Ph Et alc. 0.50%, and water up to 100%, resp. The pH was adjusted to 3.5 with addn. of NaOH. A recommended dosage was 100 .mu.L of the soln. into each nostril three times a day.

IC ICM A61K031-4015
ICS A61K031-4015; A61K033-30; A61K033-24; A61K031-375; A61K031-194; A61K031-19

CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1

IT Vinyl compounds, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(carboxy-contg., polymers; compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)

IT Carboxylic acids, biological studies
Chlorides, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)

IT Carboxylic acids, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(dicarboxylic; compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)

IT Carboxylic acids, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(salts; compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)

IT Polyphosphoric acids
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(sodium salts; compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)

IT Carboxylic acids, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(tricarboxylic acids; compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)

IT 50-21-5, Lactic acid, biological studies 50-21-5D, Lactic acid, salts **50-81-7**, Ascorbic acid, biological studies **50-81-7D**, Ascorbic acid, salts 56-84-8, Aspartic acid, biological studies 56-86-0, Glutamic acid, biological studies 64-19-7, Acetic acid, biological studies 64-19-7D, Acetic acid, salts, biological studies 65-85-0, Benzoic acid, biological studies 65-85-0D, Benzoic acid, salts, biological studies 69-72-7, Salicylic acid, biological studies 69-72-7D, Salicylic acid, salts 77-92-9, Citric acid, biological studies 77-92-9D, Citric acid, salts 79-14-1, Glycolic acid, biological studies 87-69-4, Tartaric acid, biological studies 88-99-3, Phthalic acid, biological studies 98-79-3, Pyroglutamic acid 110-15-6, Succinic acid, biological studies 110-15-6D, Succinic acid, salts 110-17-8, Fumaric acid, biological studies 110-94-1, Glutaric acid 110-94-1D, Glutaric acid, salts 124-04-9, Adipic acid, biological studies 141-82-2, Malonic acid, biological studies 141-82-2D, Malonic acid, salts 526-95-4, Gluconic acid 526-95-4D, Gluconic acid, salts **557-34-6**, Zinc acetate 994-36-5, Sodium citrate 6915-15-7, Malic acid 6915-15-7D, Malic acid, salts
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)

IT 60-12-8, Phenyl ethyl alcohol 62-33-9, Calcium EDTA 63-42-3, Lactose 64-02-8, Tetrasodium EDTA 64-17-5, Ethanol, biological studies 83-86-3, Phytic acid 139-33-3, Disodium EDTA **148-24-3**, 8-Hydroxyquinoline, biological studies 150-25-4, Di(hydroxyethyl)glycine 470-82-6, Eucalyptol 9003-01-4, Carboxypolymethylene 26266-58-0, Sorbitan trioleate 138757-67-2, Carbopol 980
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)

IT 79-10-7D, Acrylic acid, esters, polymers
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(crosslinked; compns. contg. pyroglutamic and other org. acids for prevention and treatment of cold and influenza)

L58 ANSWER 2 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:708658 HCAPLUS
DOCUMENT NUMBER: 131:327615
TITLE: Adhesive applicator with polymerization agents and/or bioactive material
INVENTOR(S): Narang, Upvan; Nicholson, William Stuart Cooper

PATENT ASSIGNEE(S): Closure Medical Corporation, USA
SOURCE: PCT Int. Appl., 43 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9955394	A1	19991104	WO 1999-US9373	19990430
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2330439	AA	19991104	CA 1999-2330439	19990430
AU 9938729	A1	19991116	AU 1999-38729	19990430
AU 741078	B2	20011122		
BR 9910064	A	20001226	BR 1999-10064	19990430
EP 1073484	A1	20010207	EP 1999-921544	19990430
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002512855	T2	20020508	JP 2000-545590	19990430

PRIORITY APPLN. INFO.: US 1998-69979 A 19980430
WO 1999-US9373 W 19990430

AB A method of applying a bioactive agent and/or a polymn. or crosslinking rate modifier and/or a polymn. initiator to an applicator tip includes dissolving or dispersing the rate modifier, the initiator, and/or the bioactive agent in a low b.p. solvent, applying the resulting soln. or dispersion to the applicator tip, and drying the applicator tip. The initiator and/or rate modifier is preferably applied in a methanol solvent and distributed along a concn. gradient on the applicator tip. A figure showing the polymn. temp. of a 2-octyl cyanoacrylate compn. dispensed through applicator tips having an initiator applied with methanol and with acetone is presented.

IC ICM A61L025-00
CC 63-8 (Pharmaceuticals)
Section cross-reference(s): 38
IT Crown ethers
Tannins
RL: POF (Polymer in formulation); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(adhesive applicator with polymn. agents and/or bioactive material)
IT Alcohols, biological studies
Bacteriocins
Polyamides, biological studies
Polyesters, biological studies
Polyolefins
Polyoxyalkylenes, biological studies
Sphingolipids
Steroids, biological studies
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(adhesive applicator with polymn. agents and/or bioactive material)
IT Quaternary ammonium compounds, biological studies
RL: POF (Polymer in formulation); **THU (Therapeutic use)**; BIOL

(Biological study); USES (Uses)
(alkylbenzyldimethyl, chlorides; adhesive applicator with polymn. agents and/or bioactive material)

IT Metacyclophanes
RL: POF (Polymer in formulation); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(calixarenes; adhesive applicator with polymn. agents and/or bioactive material)

IT Epoxides
RL: POF (Polymer in formulation); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(polymeric; adhesive applicator with polymn. agents and/or bioactive material)

IT **50-81-7**, L-Ascorbic acid, biological studies 57-13-6, Urea, biological studies 61-54-1, Tryptamine 62-56-6, Thiourea, biological studies 74-79-3, L-Arginine, biological studies 78-67-1, Azobisisobutyronitrile 99-24-1, Methyl gallate 105-58-8, Diethyl carbonate 107-21-1, 1,2-Ethanediol, biological studies 110-05-4, Di-tert-butyl peroxide 122-52-1, Triethyl phosphite 288-32-4, Imidazole, biological studies 301-10-0, Stannous octoate 603-35-0, Triphenylphosphine, biological studies 1191-50-0, Sodium tetradecyl sulfate 1309-42-8, Magnesium hydroxide 1344-09-8, Sodium silicate 1643-19-2, Tetrabutyl ammonium bromide 6701-17-3, 2-Octyl cyanoacrylate 6833-84-7, Nonactin 7631-90-5, Sodium bisulfite 7778-18-9, Calcium sulfate 9003-39-8, Povidone 9005-64-5, Polysorbate 20 9005-65-6, Polysorbate 80 14933-08-5, Dodecyldimethyl(3-sulfopropyl)ammonium hydroxide 17090-79-8, Monensin 106392-12-5, Poloxamer
RL: POF (Polymer in formulation); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(adhesive applicator with polymn. agents and/or bioactive material)

IT 55-56-1, Chlorhexidine 59-87-0, Nitrofurazone 60-54-8, Tetracycline 62-56-6D, Thiourea, quinolinone derivs., biological studies 64-19-7, Acetic acid, biological studies 127-65-1, Chloramine t 130-26-7, Clioquinol 139-12-8, Aluminum acetate **148-24-3**, 8-Hydroxyquinoline, biological studies 532-31-0, Silver benzoate 534-16-7, Silver carbonate 547-32-0, Sodium sulfadiazine 563-63-3, Silver acetate **1314-13-2**, Zinc oxide, biological studies 1404-26-8, Polymyxin B 1405-10-3 1405-20-5, Polymyxin b sulfate 1405-41-0, Gentamycin sulfate 1405-87-4, Bacitracin 1405-89-6, Bacitracin zinc 1406-05-9, Penicillin 1406-11-7, Polymyxin 6998-60-3, Rifamycin 7553-56-2, Iodine, biological studies 7681-52-9, Sodium hypochlorite 7722-64-7, Potassium permanganate 7722-84-1, Hydrogen peroxide, biological studies 7761-88-8, Silver nitrate, biological studies 7783-90-6, Silver chloride, biological studies 7783-96-2, Silver iodide 8044-71-1, Cetrimide 9003-39-8D, Polyvidone, iodinated 10118-90-8, Minocycline 10294-26-5, Silver sulfate 11081-39-3, Polymycin 12650-69-0, Mupirocin 13292-46-1, Rifampin 16923-58-3 16941-12-1, Chloroplatinic acid 18323-44-9, Clindamycin 20667-12-3, Silver oxide 22199-08-2, Silver sulfadiazine 25322-68-3 25655-41-8, Betadine 26027-38-3, Nonoxynol 9 36701-38-9, Silver citrate 41748-43-0, Chlorhexidine sulfate **66219-86-1**, Zinc sulfadiazine 77146-42-0, Chlorhexidine phosphanilate 85721-33-1, Ciprofloxacin 104534-80-7D, Quinolinone, thiourea derivs. 248259-31-6, Calcium chloroplatinate
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(adhesive applicator with polymn. agents and/or bioactive material)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 3 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:594841 HCAPLUS
DOCUMENT NUMBER: 131:219020
TITLE: Tissue paper having antimicrobial skin lotion
INVENTOR(S): Klofta, Thomas James; Steinhardt, Mark John
PATENT ASSIGNEE(S): The Procter & Gamble Company, USA
SOURCE: PCT Int. Appl., 60 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 9
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9945771	A1	19990916	WO 1999-US4221	19990226
W: AL, AM, AT, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
US 6238682	B1	20010529	US 1998-41231	19980312
CA 2322506	AA	19990916	CA 1999-2322506	19990226
AU 9927929	A1	19990927	AU 1999-27929	19990226
AU 747849	B2	20020523		
BR 9908715	A	20001121	BR 1999-8715	19990226
EP 1061799	A1	20001227	EP 1999-908519	19990226
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
JP 2002505894	T2	20020226	JP 2000-535199	19990226
ZA 9901999	A	19990913	ZA 1999-1999	19990311

PRIORITY APPLN. INFO.:
US 1998-41231 A 19980312
US 1993-165767 B1 19931213
US 1995-398727 A1 19950306
US 1996-658342 A1 19960605
WO 1999-US4221 W 19990226

AB An anhyd. lotion compn. for killing viruses and bacteria in addn. to imparting a soft, lubricious, lotion-like feel when applied to tissue paper and tissue paper treated with such lotion compns. are disclosed. The antiviral action of the lotion is due to the addn. of an org. acid such as citric acid or salicylic acid. The antibacterial action is due to the addn. of antibacterial agents such as triclosan. The solubilization of the antiviral and antibacterial agents within the lotion matrix is aided by the addn. of hydrophilic solvents and hydrophilic surfactants. The lubricious lotions also contain a plastic or fluid skin conditioning agent such as petrolatum, an optional immobilizing agent such as a fatty alc. or fatty acid to immobilize the skin conditioning agent on the surface of the tissue paper web and a hydrophilic surfactant to improve wettability when applied to toilet tissue. Because less lotion is required to impart the desired soft, lotion-like feel benefits, detrimental effects on the tensile strength and caliper of the lotioned paper are minimized or avoided. The anhyd. nature of the lotions also aids in the maintenance of such phys. properties as tensile and caliper. A lotion contained petrolatum 41.0, cetyl alc. 28.6, cetareth-10 15.2, salicylic acid 10.1, and triclosan 5.1%.

IC ICM A01N025-34

ICS A47K010-16
CC 62-4 (Essential Oils and Cosmetics)
IT Alcohols, biological studies
Fatty acids, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(C12-22; tissue paper having antimicrobial skin lotion)
IT Quaternary ammonium compounds, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(alkylbenzyldimethyl, chlorides; tissue paper having antimicrobial skin lotion)
IT Amides, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(fatty, polyhydroxy; tissue paper having antimicrobial skin lotion)
IT Essential oils
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(lemon; tissue paper having antimicrobial skin lotion)
IT Acids, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(org.; tissue paper having antimicrobial skin lotion)
IT Waxes
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(spermaceti; tissue paper having antimicrobial skin lotion)
IT Essential oils
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(tissue paper having antimicrobial skin lotion)
IT Alcohols, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(tissue paper having antimicrobial skin lotion)
IT Vitamins
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(tissue paper having antimicrobial skin lotion)
IT **50-81-7**, L-Ascorbic acid, biological studies 55-56-1, Chlorhexidine 65-85-0, Benzoic acid, biological studies 69-72-7, biological studies 77-92-9, biological studies 87-69-4, biological studies 88-04-0, Pcmx 94-13-3, Propylparaben 97-53-0, Eugenol 99-76-3, Methylparaben 101-20-2, Triclocarban 102-76-1, Triacetin 111-02-4, Squalene 121-54-0, Benzethonium chloride 123-78-4, D-Sphingosine 125-33-7, Hexamidine **148-24-3**, 8-Hydroxyquinoline, biological studies 369-77-7, Cloflucarban 499-44-5, Hinokitiol 1400-61-9, Nystatin 1404-04-2, Neomycin 1404-26-8, Polymyxin B 1405-87-4, Bacitracin 3380-34-5 6915-15-7,

Malic acid 7664-38-2, Phosphoric acid, biological studies **13463-41-7**, ZPT 15922-78-8, Sodium omadine 20910-06-9, Cholesteryl 25655-41-8, Povidone iodine 32289-58-0, Polyhexamethylene biguanide hydrochloride 39236-46-9, Imidazolidinyl urea 55965-84-9, Kathon cg 68890-66-4, Octopirox 75345-27-6, Onamer m
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(tissue paper having antimicrobial skin lotion)

IT 76-22-2, Camphor 81-13-0, Panthenol 89-78-1, Menthol 89-83-8, Thymol 106-24-1 119-36-8, Methyl salicylate 470-82-6, Eucalyptol 12441-09-7D, Sorbitan, esters
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(tissue paper having antimicrobial skin lotion)

IT 56-81-5, 1,2,3-Propanetriol, biological studies **57-55-6**, 1,2-Propanediol, biological studies 64-17-5, Ethanol, biological studies 67-63-0, Isopropanol, biological studies 71-36-3, 1-Butanol, biological studies 107-21-1, 1,2-Ethanediol, biological studies 107-41-5, Hexylene glycol 122-99-6, 2-Phenoxyethanol 1321-23-9, Chloroxylenol 9002-92-0, Brij 30 9004-95-9, Brij 56 9005-64-5, Tween 20 9005-67-8, Tween 61 9016-00-6, Polydimethylsiloxane 25322-69-4 26446-35-5, Acetoglyceride 31900-57-9, Polydimethylsiloxane
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(tissue paper having antimicrobial skin lotion)

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 4 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1999:511033 HCAPLUS
DOCUMENT NUMBER: 131:139492
TITLE: Chelated 8-hydroxyquinoline for the treatment of epithelial lesions
INVENTOR(S): Jordan, Russel T.; Hanson, Carl C.; Potestio, Frank S.
PATENT ASSIGNEE(S): Dermex Pharmaceuticals, LLC, USA
SOURCE: PCT Int. Appl., 34 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9939721	A1	19990812	WO 1999-US2817	19990210
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2320628	AA	19990812	CA 1999-2320628	19990210
AU 9925956	A1	19990823	AU 1999-25956	19990210
AU 755521	B2	20021212		

EP 1052999 A1 20001122 EP 1999-905911 19990210
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI
NZ 506367 A 20030328 NZ 1999-506367 19990210
US 6476014 B1 20021105 US 2001-601304 20010102
US 2003113381 A1 20030619 US 2002-247161 20020918
US 2003114484 A1 20030619 US 2002-247526 20020918
PRIORITY APPLN. INFO.: US 1998-21421 A2 19980210
WO 1999-US2817 W 19990210
US 2001-601304 A3 20010102

AB Oxinates including 8-hydroxyquinoline and a heavy metal are topically applied to epidermal lesions for therapeutic effect. The therapeutic compn. demonstrates selective toxicity with a therapeutic index of 100% on human lung cancer, breast cancer, melanoma, venereal warts, male veruoca warts, lesions produced by human papilloma virus, basal cell carcinoma, solar keratosis, and Kaposi's sarcoma. In veterinary applications where dogs, cats, and horses are the patients, the compn. shows a 100% therapeutic index with selective toxicity against eye cancer, sarcoids, sarcoma, malignant melanoma, rectal adenoma, histiocytoma, and sebaceous adenoma.

IC ICM A61K033-00
ICS A61K033-24

CC 1-6 (Pharmacology)
Section cross-reference(s): 63

IT Glycols, biological studies
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(chelated hydroxyquinoline for treatment of epithelial lesions)

IT Heavy metals
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(chelates; chelated hydroxyquinoline for treatment of epithelial lesions)

IT Polyoxyalkylenes, biological studies
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(ethers, propylene glycol polyoxyalkylene ether derivs.; chelated hydroxyquinoline for treatment of epithelial lesions)

IT Lecithins
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(penetrant; chelated hydroxyquinoline for treatment of epithelial lesions)

IT **50-81-7**, L-Ascorbic acid, biological studies **50-81-7D**, Ascorbic acid, derivs. **500-38-9 500-38-9D**, derivs.
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(antioxidant; chelated hydroxyquinoline for treatment of epithelial lesions)

IT **57-55-6D**, Propylene glycol, polyoxyalkylene ether derivs.
148-24-3D, 8-Hydroxyquinoline, chelates **7439-89-6D**, Iron, chelates with 8-hydroxyquinoline, biological studies **7439-96-5D**, Manganese, chelates with 8-hydroxyquinoline, biological studies **7439-98-7D**, Molybdenum, chelates with 8-hydroxyquinoline, biological studies **7440-48-4D**, Cobalt, chelates with 8-hydroxyquinoline, biological studies **7440-50-8D**, Copper, chelates with 8-hydroxyquinoline, biological studies **13978-85-3**, Zinc 8-hydroxyquinolinate
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(chelated hydroxyquinoline for treatment of epithelial lesions)

IT **57-55-6**, 1,2-Propanediol, biological studies **134-03-2**, Sodium ascorbate **4468-02-4**, Zinc gluconate 8049-65-8, Plastibase 50w 106392-12-5, Pluronic F 127 236391-72-3, Aquabase
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(chelated hydroxyquinoline for treatment of epithelial lesions)

IT **67-68-5**, Dimethyl sulfoxide, biological studies
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(penetrant; chelated hydroxyquinoline for treatment of epithelial lesions)

IT **148-24-3**, 8-Hydroxyquinoline, reactions **7646-85-7**, Zinc chloride, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(reaction; chelated hydroxyquinoline for treatment of epithelial lesions)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 5 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:582385 HCAPLUS
DOCUMENT NUMBER: 129:342354
TITLE: Ceramide accumulation during oxidant renal tubular injury: mechanisms and potential consequences
AUTHOR(S): Zager, Richard A.; Conrad, D. Scott; Burkhart, Kristin
CORPORATE SOURCE: Department of Medicine, University of Washington, Seattle, WA, USA
SOURCE: Journal of the American Society of Nephrology (1998), 9(9), 1670-1680
CODEN: JASNEU; ISSN: 1046-6673
PUBLISHER: Williams & Wilkins
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Ceramide is an important signaling mol. that is typically generated via sphingomyelinase (SMase)-mediated sphingomyelin (SM) hydrolysis. Although diverse forms of renal injury elicit ceramide accumulation, the mol. determinants of this change and its contribution to tissue damage are poorly defined. The present study uses iron (Fe/hydroxyquinoline)-mediated injury of cultured human proximal tubular (HK-2) cells to gain addnl. insights into these issues. A 4-h Fe exposure doubled ceramide levels in the absence of cell death. This was independent of de novo synthesis, since ceramide synthase inhibition (with fumonisin B1) had no effect. Oxidant stress directly suppressed, rather than stimulated, SMase activity by: (1) decreasing SMase levels; (2) depleting SMase-stimulating glutathione; and (3) increasing SM resistance to SMase attack. Fe suppressed cell sphingosine levels (3 to 4 times ceramide/sphingosine ratio increments), suggesting a possible ceramidase block. Fe did not directly affect HK-2 ceramidase levels. However, arachidonic acid (C20:4) accumulation, a consequence of oxidant-induced phospholipase A2 (PLA2) activation, markedly suppressed ceramidase and stimulated SMase activity. Exogenous C20:4, as well as PLA2 (in doses simulating Fe-induced deacylation) recapitulated Fe's ceramide-generating effect. Because C20:4 is directly cytotoxic, it was hypothesized that ceramide might offset some of C20:4's adverse effects. Supporting this possibility were the following: (1) C20:4 exacerbated Fe toxicity; (2) this was abrogated by ceramide treatment; and (3) ceramide blunted Fe-mediated cell death. Conclusions: (1) ceramide accumulation during acute cell injury can be an adaptive response to PLA2 activation/C20:4 generation; (2) C20:4-induced ceramidase inhibition, coupled with SMase stimulation, may trigger this result; and (3) these ceramide increments may exert a "biostat" function, helping to offset C20:4/PLA2- and "catalytic" iron-mediated tubular cell

death.
CC 14-12 (Mammalian Pathological Biochemistry)
IT **7439-89-6**, Iron, biological studies
RL: ADV (Adverse effect, including toxicity); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(-hydroxyquinoline oxidant; ceramide accumulation during oxidant renal tubular injury in relation to sphingomyelinase, glutathione, arachidonate, and phospholipase A2)
IT **148-24-3**, 8-Quinolinol, biological studies
RL: ADV (Adverse effect, including toxicity); BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(-iron oxidant; ceramide accumulation during oxidant renal tubular injury in relation to sphingomyelinase, glutathione, arachidonate, and phospholipase A2)
IT **9001-84-7**, Phospholipase A2
RL: ADV (Adverse effect, including toxicity); **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(ceramide accumulation during oxidant renal tubular injury in relation to sphingomyelinase, glutathione, arachidonate, and phospholipase A2)
IT 9031-54-3, Sphingomyelinase C
RL: **BAC (Biological activity or effector, except adverse)**; BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(ceramide accumulation during oxidant renal tubular injury in relation to sphingomyelinase, glutathione, arachidonate, and phospholipase A2)
REFERENCE COUNT: 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 6 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1998:197363 HCAPLUS
DOCUMENT NUMBER: 128:262004
TITLE: Hydrogen peroxide disinfecting and sterilizing compositions
INVENTOR(S): Scoville, John R., Jr.; Novicova, Inna A.
PATENT ASSIGNEE(S): Cottrell, Ltd., USA
SOURCE: PCT Int. Appl., 24 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9811777	A1	19980326	WO 1997-US16421	19970917
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
AU 9744195	A1	19980414	AU 1997-44195	19970917
EP 957683	A1	19991124	EP 1997-942512	19970917
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2001506971	T2	20010529	JP 1998-514826	19970917

BR 9712070 A 20020115 BR 1997-12070 19970917
US 5900256 A 19990504 US 1998-24881 19980217
PRIORITY APPLN. INFO.: US 1996-715337 A 19960918
WO 1997-US16421 W 19970917

AB An aq. acidic disinfecting and sterilizing compn. for medical instruments, which may include brass, copper, aluminum, stainless steel, plastic and ceramic components. The compn. contains hydrogen peroxide, peracetic acid, a corrosion inhibitor system, a surfactant and a stabilizer. These compns. have in use stability and are effective as a disinfectant and/or sterilant either at room or when heated. For other applications, surfactants, sequestering agents and stabilizers may be optional. A compn. was prepd. contg. H2O2 7.3, peracetic acid 0.23, 1-hydroxyethylidene-1,1-diphosphonic acid 0.70, 8-hydroxyquinoline 0.0035, propylene glycol 4.10, nonylphenol surfactant 0.002, 1,2,3-benzotriazole 1.00, Na nitrite 0.25, Na molybdate 0.25% by wt. and deionized water to 100%.

IC ICM A01N025-08
CC 63-8 (Pharmaceuticals)
IT Acids, biological studies
Glycols, biological studies
RL: MOA (Modifier or additive use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(hydrogen peroxide disinfecting and sterilizing compns.)
IT Carboxylic acids, biological studies
RL: MOA (Modifier or additive use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(peroxy; hydrogen peroxide disinfecting and sterilizing compns.)
IT **57-55-6**, Propylene glycol, biological studies 65-85-0D, Benzoic acid, salts, biological studies 79-21-0, Peracetic acid 95-14-7, 1H-Benzotriazole **148-24-3**, 8-Quinolinol, biological studies 2809-21-4, 1-Hydroxyethylidene-1,1-diphosphonic acid **7631-95-0**, Sodium molybdate 7632-00-0, Sodium nitrite
RL: MOA (Modifier or additive use); **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(hydrogen peroxide disinfecting and sterilizing compns.)
IT 7722-84-1, Hydrogen peroxide, biological studies
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(hydrogen peroxide disinfecting and sterilizing compns.)
REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L58 ANSWER 7 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1996:212832 HCAPLUS
DOCUMENT NUMBER: 124:282863
TITLE: The environment of the lipoxygenase iron binding site explored with novel hydroxypyridinone iron chelators
AUTHOR(S): Abeysinghe, Rajeewa D.; Roberts, Pamela J.; Cooper, Chris E.; MacLean, Kirsteen H.; Hider, Robert C.; Porter, John B.
CORPORATE SOURCE: Dep. Clinical Hematol., Univ. Coll. London Med. Sch., London, WC1E 6HX, UK
SOURCE: Journal of Biological Chemistry (1996), 271(14), 7965-72
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The mechanisms of lipoxygenase inhibition by iron chelators have been

investigated in human neutrophils and in isolated soybean lipoxygenase. Their Fe(III)-contg. active sites have been targeted by synthesizing novel bidentate chelators from the hydroxypyridinone family sufficiently small to gain access through the hydrophobic channels of lipoxygenase. In stimulated human neutrophils, release of [3H]arachidonate-labeled eicosanoids is dependent on the lipid soly. of hydroxypyridinones, but larger hexadentate chelators have no effect on this or on total cellular leukotriene B4 prodn. Lipophilic hydroxypyridinones inhibit 5-lipoxygenase at equiv. concns. to the established inhibitor, piriprost, and show addnl. but minor anti-phospholipase A2 activity. Soybean 15-lipoxygenase inhibition is also dependent on the lipid soly. and coordination structure of chelators. Inhibition is assocd. with the formation of chelate-iron complexes, which are removed by dialysis without restoration of enzyme activity. Only after adding back iron is activity restored. ESR studies show the removal of the iron center signal (g = 6) is concomitant with formation of Fe(III)-chelator complexes, identical in spectral shape and g value to 3:1 hydroxypyridinone Fe(III) complexes. Removal of iron is not the only mechanism by which hydroxypyridinones can inhibit lipoxygenase in intact cells, however, as a lipophilic non-iron-binding hydroxypyridinone, which shows no inhibition of the soybean lipoxygenase activity, partially inhibits 5-lipoxygenase in intact neutrophils without inhibiting neutrophil phospholipase A2.

CC 7-3 (Enzymes)
Section cross-reference(s): 13

IT 30652-18-7, CP 25
RL: **BAC (Biological activity or effector, except adverse)**; BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(chelating agent; mechanism inhibition of arachidonate lipoxygenase by novel hydroxypyridinone iron chelators in vitro and in neutrophils)

IT 70-51-9, Desferrioxamine **148-24-3**, Oxine, biological studies 533-75-5, Tropolone 4940-11-8, Ethylmaltol **7439-89-6**, Iron, biological studies **9001-84-7**, Phospholipase A2 30652-11-0, CP20 30652-21-2, CP40 49744-73-2, CP 84 63551-74-6, Arachidonate lipoxygenase 79672-88-1, Piriprost 80619-02-9, 5-Lipoxygenase 82249-77-2, 15-Lipoxygenase 82756-29-4, CP 26 90037-19-7, CP02 126055-13-8, CP102 138597-35-0, CP 166 175669-09-7, Ome 25
RL: **BAC (Biological activity or effector, except adverse)**; BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(mechanism inhibition of arachidonate lipoxygenase by novel hydroxypyridinone iron chelators in vitro and in neutrophils)

L58 ANSWER 8 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1995:568995 HCAPLUS
DOCUMENT NUMBER: 123:137169
TITLE: Tetrahydropterin Reactions of Dioxo-Molybdenum(6+) Complexes: Does Redox Occur?
AUTHOR(S): Burgmayer, Sharon J. Nieter; Arkin, Michelle R.; Bostick, Laura; Dempster, Sara; Everett, Kristin M.; Layton, Heather L.; Paul, Kateri E.; Rogge, Cory; Rheingold, Arnold L.
CORPORATE SOURCE: Department of Chemistry, Bryn Mawr College, Bryn Mawr, PA, 19010, USA
SOURCE: Journal of the American Chemical Society (1995), 117(21), 5812-23
CODEN: JACSAT; ISSN: 0002-7863
PUBLISHER: American Chemical Society
DOCUMENT TYPE: Journal

LANGUAGE: English

AB This report describes our continued investigation of reactions between tetrahydropterins and dioxo-molybdenum complexes. We report the results of structural, reactivity, and theor. expts. that indicate these reduced molybdenum-pterin complexes are better described as Mo(6+)-H4pterin rather than Mo(4+)-H2pterin as previously assigned. Both Mulliken charges calcd. using the extended Huckel MO method and the bond valence sum method predict a formal molybdenum oxidn. state midway between 5+ and 6+. The complexes Mo2O4Cl2(tetrahydro-6,7-dimethylpterin)2, MoOCl3(tetrahydro-6,7-dimethylpterin), and MoOCl2(tetrahydro-6-(hydroxymethyl)pterin)(diethyldithiocarbamate) have been characterized by 1H NMR, IR, UV/vis., and cond. measurements. The x-ray crystal structure is reported for Mo2O4Cl2(tetrahydro-6,7-dimethylpterin)2.cntdot.4DMF. Inner coordination sphere bond distances indicate substantial electron d. is donated from the pterin N(5) to Mo. These complexes undergo solvation and ligand substitution reactions. It is shown that solvation is assocd. with acid-base reactions at the tetrahydropterin ligands. The molybdenum-tetrahydropterin complexes show a variety of reactivities toward the oxidants O2, 2,6-dichloroindophenol, and DMSO. This study shows that tetrahydropterin has a high affinity to chelate Mo(6+) if one of the two oxo ligands is removed and that coordination to molybdenum stabilizes tetrahydropterins toward oxidn. Results from this study also suggest that dioxo-Mo(VI) coordination to tetrahydropterin is unlikely.

CC 7-4 (Enzymes)
Section cross-reference(s): 67, 75, 78

IT Enzymes
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(molybdenum-contg., synthesis and redox reactions of tetrahydropterin dioxo-molybdenum(6+) complexes as models for molybdoenzyme MoCo)

IT **16065-87-5**, Molybdenum(6+), biological studies 73508-07-3, MoCo 89700-34-5, Molybdopterin
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); PRP (Properties); BIOL (Biological study)
(synthesis and redox reactions of tetrahydropterin dioxo-molybdenum(6+) complexes as models for molybdoenzyme MoCo)

IT 1008-35-1DP, complexes with dioxo-molybdenum derivs. **7439-98-7DP**, Molybdenum, dioxo, complexes with tetrahydropterin **166331-14-2P 166331-15-3P 166331-16-4P 166331-17-5P 166331-18-6P**
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
(synthesis and redox reactions of tetrahydropterin dioxo-molybdenum(6+) complexes as models for molybdoenzyme MoCo)

IT **67-68-5**, reactions **148-24-3**, 8-Hydroxyquinoline, reactions 611-55-2 956-48-9, Dcip 1008-35-1 1538-75-6 7698-05-7, Hydrochloric acid-d 7782-44-7, Oxygen, reactions **13637-68-8 17524-05-9 19680-83-2 75780-89-1** 91379-84-9 166331-19-7 166331-21-1
RL: RCT (Reactant); RACT (Reactant or reagent)
(synthesis and redox reactions of tetrahydropterin dioxo-molybdenum(6+) complexes as models for molybdoenzyme MoCo)

L58 ANSWER 9 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1993:455828 HCAPLUS
DOCUMENT NUMBER: 119:55828
TITLE: Status of certain additional over-the-counter drug

category II and III active ingredients
CORPORATE SOURCE: United States Food and Drug Administration, Rockville, MD, 20857, USA
SOURCE: Federal Register (1993), 58(88), 27636-44, 10 May 1993
CODEN: FEREAC; ISSN: 0097-6326
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Certain over-the-counter drugs are not generally recognized as safe and effective or are misbranded under the Federal Food, Drug, and Cosmetic Act. The list includes digestive, external analgesic, insect bite and sting, poison ivy, skin protectant, diaper rash, topical antifungal, and oral analgesic products.
CC 63-2 (Pharmaceuticals)
IT Charcoal
Cocoa butter
Kaolin, biological studies
Lanolin
Pharmaceutical natural products
Protein hydrolyzates
Tannins
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(over-the-counter prepns. contg., stds. for)
IT Quaternary ammonium compounds, biological studies
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(alkylbenzyldimethyl, chlorides, over-the-counter prepns. contg., stds. for)
IT Essential oils
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(cinnamon, over-the-counter prepns. contg., stds. for)
IT Essential oils
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(clove, over-the-counter prepns. contg., stds. for)
IT Tar
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(coal, over-the-counter prepns. contg., stds. for)
IT Essential oils
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(eucalyptus, over-the-counter prepns. contg., stds. for)
IT Turpentine
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(oil, over-the-counter prepns. contg., stds. for)
IT Essential oils
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(peppermint, over-the-counter prepns. contg., stds. for)
IT Essential oils
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(sage, Salvia officinalis, over-the-counter prepns. contg., stds. for)
IT Phenols, compounds
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(sodium salts, over-the-counter prepns. contg., stds. for)
IT 50-21-5, biological studies 50-29-3, Chlorophenothane, analysis 50-78-2, Aspirin 52-28-8, Codeine phosphate 52-89-1, Cysteine hydrochloride 54-21-7, Sodium salicylate 56-40-6, Glycine, biological studies 56-81-5, 1,2,3-Propanetriol, biological studies 56-92-8, Histamine dihydrochloride 57-06-7, Allyl isothiocyanate 57-13-6, Urea, biological studies 57-15-8, Chlorobutanol 57-24-9, Strychnine 57-50-1, Sucrose, biological studies **57-55-6**, 1,2-Propanediol, biological studies 58-55-9, Theophylline, biological studies 58-56-0 59-33-6, Pyrilamine maleate 59-51-8, Racemethionine 60-29-7, Ether,

biological studies 60-80-0, Antipyrine 61-73-4, Methylene blue 62-44-2, Phenacetin 62-54-4, Calcium acetate 63-42-3 64-17-5, Alcohol, biological studies 64-18-6, Formic acid, biological studies 65-45-2, Salicylamide 65-85-0, Benzoic acid, biological studies 67-03-8, Thiamine hydrochloride 67-63-0, 2-Propanol, biological studies 67-64-1, Acetone, biological studies 67-66-3, Chloroform, biological studies 69-65-8, D-Mannitol 69-72-7, Salicylic acid, biological studies 76-22-2 76-57-3, Codeine 79-09-4, Propionic acid, biological studies 80-49-9, Homatropine methylbromide 81-13-0, Dexpanthenol 83-88-5, Riboflavin, biological studies 86-75-9, Benzoxiquine 87-28-5, Glycol salicylate 89-68-9, Chlorothymol 89-83-8, Thymol 93-60-7, Methyl nicotinate 94-09-7, Benzocaine 94-13-3 97-18-7, Bithionol 97-23-4, Dichlorophen 97-53-0 98-92-0, Niacinamide 99-26-3, Bismuth subgallate 99-76-3, Methylparaben 100-51-6, Benzenemethanol, biological studies 100-97-0, biological studies 102-71-6, Trolamine, biological studies 102-76-1, Triacetin 108-46-3, Resorcinol, biological studies 108-95-2, Phenol, biological studies 109-95-5, Ethyl nitrite 113-92-8, Chloroprophenpyridamine maleate 115-31-1 118-55-8, Phenyl salicylate 119-36-8, Methyl salicylate 120-51-4, Benzyl benzoate 121-54-0, Benzethonium chloride 122-18-9, Cetalkonium chloride 124-87-8, Picrotoxin 126-96-5, Sodium diacetate 127-08-2, Potassium acetate **127-82-2**, Zinc phenolsulfonate 129-16-8, Merbromin 129-81-7, Iodoantipyrine 130-95-0, Quinine 132-20-7, Pheniramine maleate 134-31-6, Oxyquinoline sulfate 135-23-9, Methapyrilene hydrochloride 136-46-9 136-77-6, Hexylresorcinol 137-08-6, Calcium pantothenate 137-40-6, Sodium propionate 137-58-6, Lidocaine 147-24-0, Diphenhydramine hydrochloride **148-24-3**, Oxyquinoline, biological studies 154-69-8, Tripelennamine hydrochloride 298-14-6, Potassium bicarbonate 299-28-5, Calcium gluconate 302-17-0, Chloral hydrate 404-86-4, Capsaicin 464-49-3 532-32-1, Sodium benzoate 537-12-2, Diperodon hydrochloride 552-37-4 552-94-3, Salsalate **557-05-1**, Zinc stearate **557-09-5**, Zinc caprylate **557-28-8**, Zinc propionate **557-34-6**, Zinc acetate 569-59-5, Phenindamine tartrate 577-11-7, Docusate sodium 584-08-7, Potassium carbonate 590-46-5, Betaine hydrochloride 620-61-1 632-99-5, Basic fuchsin 814-80-2, Calcium lactate 824-35-1, Calcium salicylate 1176-08-5 1304-85-4, Bismuth subnitrate **1314-13-2** , Zinc oxide, biological studies 1314-23-4, Zirconium oxide, biological studies 1317-25-5, Alcloxa 1319-77-3, Cresol 1321-11-5, Aminobenzoic acid 1330-43-4, Boron sodium oxide (B4Na2O7) 1332-37-2, Iron oxide, biological studies 1403-17-4, Candicidin 1420-53-7, Codeine sulfate 1490-04-6, Menthol 1984-06-1, Sodium caprylate 2219-72-9, p-tert-Butyl-m-cresol **3486-35-9**, Zinc carbonate 4438-95-3 5892-10-4, Bismuth subcarbonate 6202-05-7, Cyclomethycaine sulfate 7440-02-0, Nickel, analysis 7440-44-0, Carbon, biological studies 7487-88-9, Magnesium sulfate, biological studies 7487-94-7, Mercuric chloride, biological studies 7553-56-2, Iodine, biological studies 7631-99-4, Sodium nitrate, biological studies **7646-85-7**, Zinc chloride, biological studies 7647-01-0, Hydrochloric acid, biological studies 7647-14-5, Sodium chloride, biological studies 7664-38-2, Phosphoric acid, biological studies 7664-41-7, Ammonia, biological studies 7704-34-9, Sulfur, biological studies 7705-08-0, Ferric chloride, biological studies 7720-78-7, Ferrous sulfate 7722-84-1, Hydrogen peroxide, biological studies **7733-02-0**, Zinc sulfate 7757-79-1, Potassium nitrate, biological studies 7758-98-7, Cupric sulfate, biological studies 7761-88-8, Silver nitrate, biological studies 7784-25-0, Alum, ammonium 8011-96-9, Calamine 8048-31-5, Theobromine sodium salicylate 8050-81-5, Simethicone 8063-33-0 9000-69-5, Pectin 9000-92-4, Diastase 9001-62-1, Lipase 9001-75-6,

Pepsin 9001-92-7, Prolase 9004-81-3, Polyoxyethylene laurate 9005-25-8, Starch, biological studies 10043-01-3, Aluminum sulfate 10043-35-3, Boric acid, biological studies 10043-67-1, Alum, potassium 10098-89-2, Lysine hydrochloride 10377-95-4 10402-16-1, Copper oleate 12173-47-6, Hectorite 13943-58-3, Potassium ferrocyanide 14807-96-6, Talcum, biological studies 15347-57-6, Lead acetate 21645-51-2, Aluminum hydroxide, biological studies 25086-89-9 25322-68-3D, alkyl ethers 27877-51-6, Tolindate 29825-08-9 31586-77-3, Bismuth sodium tartrate 33032-12-1, Methapyrilene fumarate 37189-34-7 37933-78-1 148619-56-1, Zyloxin
RL: **THU (Therapeutic use)**; BIOL (Biological study); USES (Uses)
(over-the-counter prepns. contg., stds. for)

L58 ANSWER 10 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1988:606529 HCAPLUS
DOCUMENT NUMBER: 109:206529
TITLE: Exploring relationships between mutagenic and carcinogenic potencies
AUTHOR(S): Piegorsch, Walter W.; Hoel, David G.
CORPORATE SOURCE: Div. Biometry Risk Assess., Natl. Inst. Environ. Health Sci., Research Triangle Park, NC, 27709, USA
SOURCE: Mutation Research (1988), 196(2), 161-75
CODEN: MUREAV; ISSN: 0027-5107
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Salmonella mutagenic and rodent carcinogenic potencies are calcd. for 112 compds. recently studied by the U.S. National Toxicol. Program. Twenty-eight of 112 compds. are seen to exhibit simultaneous nonzero mutagenic and carcinogenic potencies. These are combined with an earlier list of mutagenic and carcinogenic compds. to study possible trends in the data. A significant pos. correlation is exhibited between mutagenic and carcinogenic potencies in the combined data, although the obsd. scatter is too great for the overall result to be predictive. Classification by chem. class further indicates pos. correlations near one for chems. classified as nitroarom. and related compds. Patterns in mutagenic and carcinogenic potency over time are also examd. Mean potencies of recently studied compds. are seen to trend lower than those of compds. studied .gtoreq.10 yr ago.
CC 4-6 (Toxicology)
IT Amines, biological studies
Azo compounds
Epoxides
Nitro compounds
Trace elements, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(biol. activity of, carcinogenic and mutagenic potencies in relation to)
IT Hydrocarbons, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(chloro, biol. activity of, carcinogenic and mutagenic potencies in relation to)
IT Amines, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(nitroso, biol. activity of, carcinogenic and mutagenic potencies in relation to)
IT Aromatic hydrocarbons, biological studies

RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(polycyclic, biol. activity of, carcinogenic and mutagenic potencies in relation to)

IT 50-55-5, Reserpine **50-81-7**, biological studies 57-06-7, Allyl isothiocyanate 57-13-6D, Urea, derivs. 59-42-7 59-87-0, Nitrofurazone 69-53-4, Ampicillin 69-65-8, D-Mannitol 71-43-2, Benzene, biological studies 71-43-2D, Benzene, derivs. 75-27-4, Bromodichloromethane 75-35-4, Vinylidene chloride, biological studies 75-56-9, Propylene oxide, biological studies 76-01-7, Pentachloroethane 78-42-2, Tris(2-ethylhexyl)phosphate 78-59-1, Isophorone 78-87-5, 1,2-Dichloropropane 79-01-6, Trichloroethylene, biological studies 79-57-2 80-05-7, Bisphenol A, biological studies 80-62-6, Methyl methacrylate 82-68-8, Pentachloronitrobenzene 83-79-4, Rotenone 85-68-7, Butyl benzyl phthalate 87-62-7, 2,6-Xylidine 90-41-5 90-43-7, o-Phenylphenol 92-52-4D, Biphenyl, bromo derivs. 95-50-1, 1,2-Dichlorobenzene 96-12-8, 1,2-Dibromo-3-chloropropane 97-53-0, Eugenol 99-57-0, 2-Amino-4-nitrophenol 100-40-3, 4-Vinylcyclohexene 101-77-9 101-80-4 101-90-6, Diglycidyl resorcinol ether 103-23-1, Di(2-ethylhexyl) adipate 105-60-2, Caprolactam, biological studies 105-87-3, Geranyl acetate 106-46-7, 1,4-Dichlorobenzene 106-88-7, 1,2-Epoxybutane 106-93-4, 1,2-Dibromoethane 107-07-3, 2-Chloroethanol, biological studies 108-60-1, Bis(2-chloro-1-methylethyl) ether 108-78-1, Melamine, biological studies 108-90-7, Chlorobenzene, biological studies 108-95-2, Phenol, biological studies 109-69-3, N-Butyl chloride 112-53-8D, ethoxylated 113-92-8, Chlorpheniramine maleate 115-28-6, Chlorendic acid 117-81-7, Di(2-ethylhexyl) phthalate 119-53-9, Benzoin 121-79-9, Propyl gallate 121-88-0, 2-Amino-5-nitrophenol 124-48-1, Chlorodibromomethane 124-64-1, Tetrakis(hydroxymethyl)phosphonium chloride 126-92-1, Sodium 2-ethylhexyl sulfate 127-18-4, Tetrachloroethylene, biological studies 131-17-9, Diallyl phthalate 132-98-9, Penicillin VK 135-88-6, N-Phenyl-2-naphthylamine 136-77-6, 4-Hexylresorcinol **137-30-4**, Ziram 140-11-4, Benzyl acetate 140-88-5, Ethyl acrylate **148-24-3**, 8-Hydroxyquinoline, biological studies 149-30-4, 2-Mercaptobenzothiazole 150-68-5, Monuron 299-42-3 518-47-8, C.I. Acid yellow 73 542-75-6, 1,3-Dichloropropene 542-78-9, Malonaldehyde 563-47-3 569-61-9 584-84-9, 2,4-Toluene diisocyanate 597-25-1, Dimethyl morpholinophosphoramidate 598-55-0, Methyl carbamate 609-20-1, 2,6-Dichloro-p-phenylenediamine 630-20-6, 1,1,1,2-Tetrachloroethane 643-22-1 756-79-6, Dimethyl methylphosphonate 823-40-5 842-07-9, C.I. Solvent yellow 14 868-85-9, Dimethyl hydrogen phosphite 1163-19-5, Decabromodiphenyl oxide 1330-20-7, Xylene, biological studies 1746-01-6, 2,3,7,8-Tetrachlorodibenzo-p-dioxin 1936-15-8, C.I. Acid orange 10 2164-17-2, Fluometuron 2385-85-5, Mirex 2432-99-7, 11-Aminoundecanoic acid 2475-45-8, C.I. Disperse blue 1 2783-94-0 2784-94-3 2832-40-8, C.I. Disperse yellow 3 2835-39-4, Allyl isovalerate 2871-01-4 3567-69-9, C.I. Acid red 14 5160-02-1 6373-74-6, C.I. Acid orange 3 7601-54-9D, Trisodium phosphate, chlorinated 7704-34-9D, Sulfur, compds. 7772-99-8, Stannous chloride, biological studies 11113-50-1, Boric acid 17924-92-4, Zearalenone 21739-91-3, Cytembena 33229-34-4 56093-45-9, Selenium sulfide
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(biol. activity of, carcinogenic and mutagenic potencies in relation to)

L58 ANSWER 11 OF 11 HCAPLUS COPYRIGHT 2004 ACS on STN
ACCESSION NUMBER: 1987:453670 HCAPLUS

DOCUMENT NUMBER: 107:53670
TITLE: Mechanism of toxicity of ionic copper and copper complexes to algae
AUTHOR(S): Stauber, J. L.; Florence, T. M.
CORPORATE SOURCE: Lucas Heights Res. Lab., CSIRO, Sutherland, 2232, Australia
SOURCE: Marine Biology (Berlin, Germany) (1987), 94(4), 511-19
CODEN: MBIOAJ; ISSN: 0025-3162
DOCUMENT TYPE: Journal
LANGUAGE: English

AB Cu ions depressed both cell division and photosynthesis in Asterionella glacialis and Chlorella pyrenoidosa, whereas ionic Cu concns. which were inhibitory to cell division in Nitzschia closterium had no effect on photosynthesis, respiration, ATP prodn., electron transport, or membrane ultrastructure. This suggests that in N. closterium, Cu does not act on the chloroplast, the mitochondrion, or the cell membrane. Cu-Et xanthogenate was exceptional among the Cu complexes in that it stimulated respiration, mitochondrial electron transport, and ATP formation in N. closterium under conditions of strongly inhibited cell division and slightly stimulated photosynthesis. Ionic Cu toxicity may result from an intracellular reaction between Cu and GSH leading to a lowering of the GSH:GSSG ratio and suppression of mitosis. In addn., Cu inhibits the enzyme catalase and reduces cell defense mechanisms against H2O2 and O-free radicals. Lipid-sol. Cu complexes are more toxic than ionic Cu because both the metal and the ligand are introduced into the cell. Toxicity of ionic Cu is ameliorated by trivalent metal ions in the growth medium, including those of Mn, Co, Al, Fe, and Cr which form a layer of metal (III) hydroxide around the algal cell, adsorb Cu, and reduce its penetration into the cell. The degree of insoly. of the metal (III) hydroxide is related to its ability to protect against Cu toxicity. In addn., Mn and Co catalytically scavenge damaging H2O2 and superoxide radicals, resp., produced by the cell.

CC 4-3 (Toxicology)

IT Trace elements, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(metals, copper toxicity to Nitzschia closterium response to)

IT 7429-90-5, Aluminum, biological studies **7439-89-6**, Iron, biological studies **7439-96-5**, Manganese, biological studies 7440-47-3, Chromium, biological studies **7440-48-4**, Cobalt, biological studies
RL: **BAC (Biological activity or effector, except adverse)**; BSU (Biological study, unclassified); BIOL (Biological study)
(copper toxicity to Nitzschia closterium response to)

IT **7440-50-8**, Copper, biological studies
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(toxicity of, to algae and diatom, mechanism of)

IT **50-81-7**, Ascorbic acid, biological studies 61-82-5, 3-Amino-1,2,4-triazole 66-71-7D, 1,10-Phenanthroline, copper complexes 85-85-8D, copper complexes 108-46-3, biological studies 119-91-5D, 2,2'-Biquinoline, copper complexes 120-80-9, Catechol, biological studies 123-30-8, p-Aminophenol 366-18-7D, copper complexes 484-11-7D, 2,9-Dimethyl-1-10-phenanthroline, copper complexes 591-27-5, m-Aminophenol 1147-56-4D, 1-(2-Thiazolylazo)-2-naphthol, copper complexes 3002-81-1D, 5,6-Dimethyl-1,10-phenanthroline, copper complexes 3248-05-3D, 4,7-Dimethyl-1,10-phenanthroline, copper complexes 4733-39-5D, Bathocuproine, copper complexes 7439-92-1, Lead, biological studies 7440-02-0, Nickel, biological studies 7440-43-9, Cadmium, biological studies **7440-66-6**, Zinc, biological studies

7722-84-1, biological studies 9001-51-8, Hexokinase 9001-75-6, Pepsin
9002-07-7, Trypsin 9002-13-5, Urease
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(toxicity of, to Chlorella pyrenoidosa)

IT 114-83-0D, copper complexes 139-13-9D, Nitrilotriacetic acid, copper complexes **148-24-3D**, Oxine, copper complexes 151-01-9D, Ethyl xanthogenate, copper complexes
RL: ADV (Adverse effect, including toxicity); BIOL (Biological study)
(toxicity of, to Chlorella pyrenoidosa and Nitzschia closterium)